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The Electronic Supervisor: New Technology, New Tensions

Contractor Documents: Volume 1

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PRIVACY AND QUALITY-OF-WORK-LIFE ISSUES
IN EMPLOYEE MONITORING

Contractor Report by Dr. Alan F. Westin,
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SCOPE AND FOCUS OF THIS REPORT

Guidance from the Statement of Work

In the Statement of Work for Task 1 of our report on "Employee Monitoring," we have been directed to do two major things:

1. Trace historical trends from the 19th century to the present in employer monitoring of workers' activities in the U.S., covering available tools, employer practices, legal and social norms, and issues in debate; and
2. Evaluate present conditions and likely future trends, emphasizing principles for judgment; current practices in monitoring office workers using information technology systems; factors that may change or reshape employer purposes and practices; and institutional and interest-group forces at work.

Particular attention was to be paid to trends that might "warrant changes in Federal and State policies," including the relation of current or possible monitoring to protection of "government whistleblowers." It was specified that our historical, legal, and policy analyses would draw upon our earlier (December, 1984) report to OTA on Privacy Issues in the Monitoring of Employee Work on VDTs in the Office Environment: Practices, Interests, and Policy Choices. Since this report was quite detailed and comprehensive in its historical analysis and its treatment of legal and policy issues as of late 1984, we have incorporated segments of that analysis, suitably updated, in this report, both in the text and the Appendix.

Further Specification from our "Detailed Plan of Work"

In our "Detailed Plan of Work," approved by the OTA Project Staff, several important specifications were made to focus our report properly, and to insure that it did not duplicate unnecessarily other reports being done by OTA Contractors for this project.

1. We will be focusing on employer monitoring of on-site worker activities and behavior, and particularly where this involves use of information technology by the employer. This excludes pre-employment investigations or testing of job applicants and also the post-employment handling of former-employee personal data. It also excludes employer inquiries into off-the-job activities of employees -- in their homes, associational life, or community.

2. Following the guidance of a February, 1986 OTA staff memorandum,* we will concentrate on three current areas of on-site worker monitoring:

   a. Work measurement, both in terms of quantity and quality. The particular focus will be situations where new office-systems and communications technologies offer employers possibilities for more continuous, detailed, or non-visible monitoring of work performance than was previously possible with manual, mechanical, or electric monitoring tools.

   b. Call accounting, through computer-generated data "related to the date, time, duration, destination, and cost of calls made from a particular telephone" or other communication device. The expressed purpose for such monitoring is control of communication costs and detection of "telecommunication abuse."

   c. Computer-usage monitoring, through logging of the times or duration of an employee's use of computer time, or to insure compliance with privacy, confidentiality, and security regulations of the employer.

While we will give primary emphasis to these current issues, our historical and social analysis will necessarily include discussion of related employer monitoring or surveillance activities, since those help to illuminate employer and employee interests and are the precedents and analogies that policy-makers look to for guidance.

---

* Letter to Alan F. Westin from M. Karen Gamble, Communication and Information Technologies Program, OTA, February 19, 1986.

Perspectives for Assessing New-Technology Impacts

A key mission of OTA is to anticipate possible impacts of new technologies (in this case, information and communication technologies) and to consider whether new organizational rules or legal measures may be needed to protect various rights and interests that could be adversely affected. While this sometimes calls for free-wheeling scenarios and long-term futuristic projections, we will apply a near-term, reality-based analysis, using the next 3-5 years as our period of inquiry.

Such a near-term analysis proceeds by examining two basic issues:

1. What are fundamental and direct interests of various major groups (business or government employers, trade unions, social critics and dissenters, etc.) in the use of employee monitoring and how have these groups used or opposed employee monitoring in the past? What interest groups have done before is the best predictor of what they are likely to try to do or oppose being done with new tools.
2. What have been the abuses of power or threats to constitutional rights and values that have occurred when new tools for monitoring became available in the past? How liberty has been threatened before, and in what circumstances, is a good predictor of how new threats to liberty are likely to arise in the near future.

Adopting this perspective does not deny the value of projecting and discussing potentially new and distinctive applications of information and communication technologies by powerful institutions or interests. What the "near-term" approach assumes, however, is that new technologies are generally applied in gradual and imitative ways, and it is these effects -- the kinds of actions that the next five years are likely to witness -- that will be of primary value for OTA and its Congressional clients.

SOME BROAD PERSPECTIVES ON WORKER MONITORING

We begin our report by offering some definitions and concepts that we think will be useful to frame the historical and contemporary discussions that follow.

Major Social Issues Raised by Worker Monitoring

Workplace monitoring involves a society's values, institutional arrangements, and legal rules on at least five major social issues:

- The nature of work, and the individual roles and responsibilities a society assigns to workers;
- The industrial relations system of a society, and the role and rights of trade unions;
- Investigation and control of crime at the workplace, and related security-integrity issues (e.g., drug testing; fraud, waste, and abuse controls, etc.)
- The definition and treatment of individual privacy and dignity interests asserted by employees; and
- Employer design and application of new information technologies in the workplace, and social approaches toward the degree of discretion or regulation applied to such managerial innovation.

The point of noting the presence of these five issues is to underscore the relation between worker monitoring and some very broad, sensitive, and controversial social questions that are of current importance in all advanced industrial democracies. Though it seems to be a fairly narrow issue, the policies a society sets for worker monitoring involve both very real and symbolically important questions.

Defining Employee Monitoring

There is no generally accepted definition of employee monitoring in the personnel, social science, or legal literature. Terms such as "worker monitoring," "worker surveillance," "performance monitoring," and other variations have been used. For the purposes of this report, we think it is useful to start by noting that employer activities in this area vary according to three factors that require careful empirical investigation and judgment:

1. The employer's declared purpose and actual uses of monitoring; for example:
    - (a) to provide group data for planning and operations;
    - (b) to evaluate individual work performance and use for individual personnel decisions (pay, promotion, retraining, discharge, etc.);
    - (c) to provide personal and property security at the work site;
    - (d) to investigate specific incidents of misconduct or crime;
    - (e) to increase management control, discourage union organizing activities, identify dissidents, etc.
2. The type of monitoring used; for example:
    - (a) human, visual observation (with or without a clipboard, stopwatch, or other documentation equipment);
    - (b) listening-in on telephone transactions, either with or without recordings being made;
    - (c) microphone overhearing of worker conversations, again with or without recording;
    - (d) photographing of work, by still camera;
    - (e) video camera observations, with or without videotape recording;
    - (f) machine-generated data collection on operators' work performance, whatever type of machine being used;

- (g) recording data on the entry, movement, or location of the employee on the work premises, from traditional timeclock punch-in to computerized card or personal-identifier access systems;
- (h) automatic recording of the telephone numbers called by individual employees, for use in administration of telephone usage rules.

3. *The process by which monitoring is proposed, implemented, and used for decision-making, for example*:
    - (a) whether set unilaterally by the employer or whether employees or unions participate in setting standards or procedures;
    - (b) whether open or covert, and with or without general or specific notice to employees;
    - (c) whether casual, random, regular, or continous;
    - (d) what standards are set for good performance, and how these are arrived at;
    - (e) in performance evaluation, whether individual employees can see the records produced and contest them in any procedure.

A Socio-Legal Framework To Apply

The above discussion indicates the wide variety of employer activities that involve the use of monitoring techniques. It is also useful to identify briefly the general socio-legal concepts that American society has tended to apply in addressing most issues of monitoring or surveillance. This can be pictured in terms of five elements our society uses to weigh social interests and create standards for legal judgment: the *place* where the surveillance occurs; the *person* and *activity* being observed; the *technique* of observation or surveillance applied; the *use* made of the information obtained; and the *safeguards or limitations* followed.

While these five elements could be discussed at length, the Table developed on the next page illustrates briefly the kinds of interests and standards that each element generates in the American socio-legal tradition.

Table 1. Five Elements in the Socio-Legal Analysis of Surveillance Issues

ELEMENT	INTERESTS	STANDARD
1. The place where monitoring occurs	The property interest of the owner; the "home is your castle" interest of the individual and family;" etc.	Whether the place is one society affords a reasonable expectation of privacy
2. The person and activity being observed	Public official or private citizen; special occupation deserving confidentiality treatment (doctor, religious advisor, etc.); etc.	Whether the individual is someone entitled to greater or lesser privacy protection than the "ordinary" citizen
3. The technique of observation being applied	A. Freedom from "constant," "total," or "unfair" surveillance; B. Requirement that technique be accurate and results not subject to manipulation	A. Whether this is unreasonably intrusive surveillance, or inconsistent with basic human dignity. B. Whether the technique meets due process standards
4. The use to which put	Privacy interest of subject versus social or institutional need for surveillance	Whether the social need outweighs the reasonable expectation of privacy ("balancing tests")
5. The safeguards applied	Holding intrusion on individuals to the narrowest scope needed and with meaningful safeguards to control or disclose abuses.	Whether the surveillance system is properly bounded and limited, as a constitutional democracy requires.

HISTORICAL TRENDS IN EMPLOYEE MONITORING

Introduction

The treatment of employee monitoring in American law has essentially gone through three phases:

1. In the pre-mechanical era, 1800-1880, the law treated employment as a master-servant relationship, and the employer's power to watch, set standards, discipline, and discharge was treated as absolute.
2. In the 1880-1965 era, a period of great expansion, mechanization, and bureaucratization of employment, and of gradual social regulation of employment relationships, American law shifted to a property rights standard. When it came to worker monitoring in factory or office, American law assigned very broad rights of observation and record-keeping to the employer because of (a) ownership of the premises at which work was done; and (b) the "right to manage the work process," which was regarded as a basic employer prerogative, even under collective bargaining.
3. In the 1965-1985 era, challenges to the employer's monitoring prerogatives have been asserted in the name of privacy, dignity, worker-health, and worker-participation interests. So far, as we will show, there have been only a few legal interventions upholding such claimed rights against employer monitoring and these have generally involved special circumstances, such as monitoring of telephone conversations where the public is involved.

However, as we will also show, we may be entering a period in the near future in which a combination of new social values and the potential depth and intrusiveness of available technological monitoring will lead society to set a new balance between employer and employee interests.

It seems appropriate to divide our historical sketch into three periods, keyed to a combination of the state of office technology available in each period and broad social-value changes in American society. These periods will be 1800-1880, the era of the pre-mechanical office; 1880-1965, the era of the mechanical and electrical office; and 1965-1985, the era of advanced electronic technology. And, since call-accounting and computer-usage monitoring are both very recent phenomena, it is work-measurement that our historical sketch will cover.

The Pre-Mechanical Office, 1800-1880

Setting production standards for a job, observing and measuring worker output, and using this for rewards and/or punishments is a managerial activity as old as work itself. It was done in the ancient and medieval world, usually to slaves or serfs, as in the work of the Hebrews on the Egyptian pyramids. It was part of artisan and clerk supervision in the mercantile age, and in the era of 18th and early 19th century offices portrayed by Charles Dickens or Nathaniel Hawthorne. Similarly, in the social ethos of the 19th century, employers and their supervisors watched workers closely to prevent theft or sabotage; to see that rules of conduct and discipline were followed; and to see that moral behavior was followed on (and off) the job. The close supervisory practices of New England factory owners employing both men and women in the pre-Civil War era have been well chronicled.

In office work in this era, the means of production were quill pens, letterpress copies, ledger books, and foolscap. Employers used direct visual observation to oversee their small staffs, who worked in full and constant view of their employers. Private offices were unknown for workers. Standards of output and accuracy levels were set by employers without legal or governmental intervention of any kind, and sanctions from loss of pay to dismissal were applied by employers on the basis of their evaluation of a worker's performance, with no appeal rights by the employee to public authorities, and with no labor unions available for office workers. Record-keeping about employee performance, given the small-scale nature of both business and government office work, was generally limited and informal.

The Mechanical and Electrical Office, 1880-1980

Between the 1870's and 1900, four technological developments took place that changed either the nature of office work or the ways in which worker monitoring could be conducted. The invention of the telephone in the 1880's made telephone work in the office a major organizational activity; created a major new occupational group (the "telephonist" or telephone operator), and carried with it the capability for employers to monitor either statistics of telephone operations or the employee's conversational performance. The invention of the microphone in the 1870's provided both an office operation (dictating and transcribing) and a tool for microphone easvesdropping (surreptitiously, if desired) on the conversations of employees throughout the employer's premises. The invention of the typewriter and other mechanical business machines in the 1870's and 80's (adding machines, calculators, mimeograph machines) provided tools for faster, more uniform, and more measurable office activities, especially at the clerical and secretarial levels. Finally, the invention of "instantaneous cameras" in the 1880's, with dry-plate, fixed-focus photography, allowed the capture of immediate events and situations in a "candid" and quick fashion; this began the process

Eavesdropping on Employee Conversations for Non-Work Measurement Purposes

Histories of telephone tapping and room microphoning document that listening to conversations of employees was a practice that certain types of employers engaged in throughout this era, especially given the weak anti-wiretapping laws in the United States in the 1880-1965 years.[1] Some employers used such surveillance for eavesdropping on the at-work conversations of employees active in union affairs, especially during periods of labor negotiations; or for investigation of employee theft or other suspected criminal activity of workers; or for employee loyalty-security investigations at periods of high concern about suspected subversive activities (the 1920's, 1950's, etc.). Other uses included eavesdropping on telephone calls or room conversations to discover disloyal professional employees or managers who might be giving confidential business information or trade secrets to competitors.

Something of a high point in such practices during this period took place in the early 1960's, when advanced (microminiaturized) listening devices and closed-circuit television cameras entered the general marketplace. A budding business by private-detectives and electronics firms offered to (and did) install such devices when businesses built new headquarters or opened new offices. "It's so much more cost-effective to wire up your whole premise at initial construction time, and have a console for selective listening in the executive suite," went this appeal, "than to have put such equipment in later."[2] While such omnibus eavesdropping was not widespread, there was ample documentation in court trials, legislative hearings, and newspaper stories in the 1950's and 60's of extensive ad hoc eavesdropping by employers for the purposes noted above.[3]

Work-Measurement Monitoring

In our 1984 OTA Report, we characterized the issues involved in work-performance monitoring in the 1880-1965 period in the following historical and analytic terms:[4]

> "In every era, work measurement brings to the fore a classic tension between employers and employees. There are conflicting interests in the quality and rate of work set as a norm, the rate of pay, the way in which supervision of performance is accomplished, and whether individual or group output is used to determine pay or promotion. The constant introduction of new technologies in modern societies leads to continuous debate over fair standards and fair measurement techniques, as work settings in factories and offices undergo major changes.
>
> "In practice, the standards and measurement techniques applied by management reflect many factors: prevailing social and cultural values, current theories of mangement, expectations and perceptions of employees, the state of the labor market, collective bargaining in unionized organizations, and, in some areas, regulatory and legal controls. In economic terms, managements in modern, advanced-industrial societies have to balance their interests in expanding productivity with an awareness that work standards and measurements techniques that employee consider unfair can harm employee

morale and commitment, create physical and emotional stress, increase absenteeism and turnover, generate employee sabotage and generally impair the increased productivity the employer is trying to achieve.

"Similarly, employees reacting to production standards today have to take into account the viability and survival of their employer in a competitive world, and the possible peril to their jobs if work is not produced in sufficient quantity or if the quality of the work is not good enough.

"The social policy questions as to work monitoring are roughly similar to those presented in other privacy settings, such as wiretapping, computerization of credit records, or use of polygraph testing. In work monitoring, society has to decide: (1) whether to leave the setting and applying of work standards to private resolution (through labor-management negotiations in unionized settings or, in non-union settings, to an assumed "labor market" effect on the attracting and keeping of good employees); (2) whether to ban certain types or uses of work monitoring completely, as so subject to abuse and so destructive of employee dignity that it should not be allowed; or (3) whether to allow work monitoring at the employer's discretion, but set conditions on its use, intended to protect employee privacy, health, or other interests while still allowing 'proper use' to employers as an important productivity and work-quality tool."

Our 1984 OTA Report then presented for 1880-1970 an analysis of employer monitoring goals and practices; trade union and civil-liberties-group protest; estimates of monitoring uses; and the norms, arbitration rulings, and legal doctrines that had developed in American society on work monitoring during those 90 years. Following this, the 1984 Report discussed the changing social and legal environment on these issues between 1970 and about 1980, in what was called the immediate pre-OA (office automation) baseline. Since we believe this historical presentation remains accurate and complete, we reproduce below the overall 1880-1980 summary of work-measurement monitoring from our 1984 OTA Report. (We have also included in the Appendix the two sections from the 1984 Report developing this material period by period, and providing footnote documentation for the trends identified.)

"A. A Recap of Basic Pre-OA Trends

If we look at work settings in the office in the 1960s and 1970s, before the introduction of word processors and micros, an occupational map of performance monitoring of office employees might have been drawn as follows:

Highly-routinized jobs	Semi-routine jobs	Least-routinized jobs
Data and order entry	Secretary	Executive secretary
Customer-service (complaints, telephone orders, reservations, etc.)	Draftsperson	Professional and scientific worker
	Claims adjustor	
Typing pool	Messenger and mail clerk	Salesperson
Financial and inventory clerk	Receptionist	Supervisor and manager
	Programmer	Executive

"Workers in the highly-routinized categories generally had quantitative standards set for their performance, and we saw that regular collection of data on their individual output was done in some offices to see that performance continued to meet the standards. This was done on two bases: (1) quantity — lines typed, orders entered, papers filed, calls taken, etc.; and (2) quality — errors in typing and data entry, papers misfiled, poor or discourteous handling of customer calls, etc.

"Somewhat "looser" production standards were set for office workers in the semi-routine jobs. "Subjective" and "qualitative" factors were usually considered sufficiently important that only periodic quantitative checks were made and these were usually balanced against the qualitative measures.

"Among the least-routine jobs, salespersons were usually subjected to rigorous performance measurement, in the form of orders taken, dollar-volumes sold, etc., so that a high-autonomy job could sometimes be one in which individual and regular numerical monitoring took place. For most of the sample occupations listed under our "least-routine work" category, however, individual monitoring did not take place. There, the employee's performance was judged by the output of units or groups that he or she belonged to (scientific and technical workers) or that the employee directed (as supervisors, managers, and executives).

"This sample of occupational groups also reflects the status, compensation, and power spectrum in organizational offices. The higher the occupational status, the less likely that quantitative standards on an individual basis would be set (with a few exceptions, such as sales), and that regular or even periodic monitoring of individuals would be done by management.

"The critical aspects of individual monitoring of highly-routinized jobs in the pre-OA era was that direct, visual supervision was necessarily occasional (supervisors couldn't be everywhere at once); and record-keeping was not total and continuous (whether of sign-in and sign-outs or tracking work-volumes by small units of time, such as hours or even by day). And, where telephone-service monitoring was used, this was a periodic, sampling technique, rather than a continuous oversight.

" In terms of social norms and legal controls, measuring work output for highly-routine and semi-routine jobs seemed acceptable to social opinion in the pre-OA era of 1945-1980. Social critics and unions would attack "sweat shop" employers who paid low wages, set high production quotas, and supervised their employees in "exploitive" ways. Judged by objective actions of society — low unionization of such employees despite heavy union organization efforts; the absence of general regulatory intervention; and non-intervention by the courts under any statutory or constitutional bases — it seems accurate to say that the American public assumed that most office work was being measured and most individuals were being evaluated in ways that did not call for social interventions against existing employer practices.

" There were two important types of "monitoring" that were exceptions to this social approval: (1) employer monitoring of telephone calls by employee customer-service operators (for telephone companies, airline reservations, newspaper classified-ad departments, utilities, etc.) and (2) employer use of hidden microphones to record employees at various work locations. In these areas, as we saw, there were some interventions in the pre-OA era — by statute or regulatory-agency rule, or under a few collective bargaining contracts. We will return to these actions and their relationship to the

VDT work monitoring question later in this report. The key point to make here is that there were some forms of employer monitoring of employee on-the-job performance that had already raised privacy issues in the pre-OA office setting, and for which concepts of "reasonable" and "unreasonable" employer surveillance had been formulated.

"Throughout the development of the per-OA office, from the early days of mechanization and standardization of office work (1890-1930s) to the 1960-1980 period of electric efficiency and "modern management," there have been not only conflicts between the classic union position ("group" rather than "individual" norms for pay and performance) and that of management, but also a diversity of positions within the management camp itself as to the most effective and justified methods of measuring and rewarding employee performance. These employee-relations issues involve whether to use incentive pay systems for various types of jobs and occupations; how to use time-method-and-motion studies and other quantitative "standard-setting" approaches; what are acceptable and unacceptable techniques of supervisory observation and evaluation; and other similar issues. By the 1970s, the literature on work measurement and evaluation featured many divergent judgments as to the best management approaches in the work environments and employee-value orientations of our era. These ranged from the traditional, Taylor-based belief in scientific time-motion approaches using standards and competitive incentives to calls for more employee-participative and "humanistic" approaches. (See the footnotes for examples of these positions.) These were not privacy based issues, we should note, but matters of employee or labor relations, governed essentially by collective bargaining where office employees were union represented or by marketplace factors and employer-philosophy in the non-union settings."

New Employee Privacy Rights Recognized

By the close of the 1965-1980 period, as part of the overall shift away from a property rights emphasis in balancing employer-employee social interests toward a recognition of some privacy interests by employees, American social norms and law made some important changes in employer prerogatives vis a vis monitoring of employees. We can illustrate this by noting the limitations placed on listening to or photographing workers on the job and the collection and recording of evaluative data on employee performance.

First, referring back to our Table on page 7, we can see that American society now identified various places and activities of employees that were felt to require privacy protection even though they occurred on the employer's property and affected the employer's interests. This was particularly true when employer monitoring was being carried out with new technological tools and in covert fashion. A good example was the enactment in Connecticut in 1971 of a law titled, "Use of Electronic Surveillance Devices By Employers Limited."[5] This law provides that no employer or its agent shall operate any electronic surveillance device or system to record the sounds or voices or use any closed circuit television device to record or monitor employees in "areas designated for health or personal comfort" or provided "for safeguarding of their possessions," such as "rest rooms, locker rooms, or lounges." (Such laws were passed in response to widely publicized news reports in the 1960's of some employers bugging rest rooms and lounges with new microminiaturized listening devices, and also using concealed closed circuit TV cameras for employee surveillance in such places.)[6]

Then, in 1980, Connecticut expanded this same statute to prohibit either employers or employees, or their representatives, to use electronic surveillance devices to overhear or record "a conversation or discussion pertaining to employment contract negotiations between the two parties," unless the consent of all parties to such conversations had been obtained.[7] Here, the law was affording privacy protection to a type of activity -- discussions by employees (or by management) about labor contract negotiations -- that society believed ought not to be monitored even though discussions by employees or union representatives were taking place on the employer's property and during working hours.

Secondly, federal wiretapping control law (Title III of the Omnibus Crime Control and Safe Streets Act of 1968)[8] forbade persons other than law enforcement officials to engage in telephone tapping or room eavesdropping, even by an employer on its own property, and on its own telephone system, unless this were done under certain exceptions. The exception relevant to our topic is service observing of telephone operators (as already discussed). Similar statutes were enacted by most states.[9] While there is little doubt that some employers have continued to use covert microphoning or phone tapping in labor relations work, security investigations, or intra-management struggles, reported incidents of such conduct have been rare over the past decade, and the kind of widespread employer "wiring up" documented in the 1960's has been greatly reduced.

Third has been the creation of new organizational policies and some legal controls over the collection and maintenance of employee performance data.

In the 1965-1980 period, as social concern about data banks and privacy arose and was translated into new organizational policies and privacy-protection laws, employer computerization and use of personal data on employees was one of the key issues. This development is treated in detail in Alan F. Westin, Computers, Personnel Administration, and Citizen Rights, U.S. National Bureau of Standards Special Publication 500-50 (1979) and in the report of the U.S. Privacy Protection Study Commission, Personal Privacy in An Information Society (1977).

For our purposes, several aspects of the "data surveillance of employees" issue seem relevant. By 1980 (and continuing to the present) the federal government, many state and local governments, and most large to medium sized private employers have adopted employee privacy codes limiting data collection or retention to job-relevant information; setting confidentiality rules for handling sensitive employee information within the employer organization; setting guidelines for release of employee personal data outside the employer organization; and providing employees with the right to examine their personnel records and contest the accuracy or completeness of information there. In addition, state employee privacy statutes began to be passed in the late 1970's providing access rights to private-sector employees and setting confidentiality rules for handling such data; 10 states have passed such statutes as of 1985.[10]

The effect of such employee record-privacy rules and laws was to cause most employers to re-examine what information they put into supervisory or personnel files, and to be aware that employees could now examine such records -- including work monitoring data -- if it was preserved by the employer. As is often the case in privacy-protection laws, the employee privacy codes and laws did not forbid employers to collect and record evaluative data on employee performance, but they did bring what employers recorded into the reach of employee inspection rights, and with that, of challenges to the accuracy, completeness, and ultimately the proper usage of such work monitoring data.

CURRENT WORK-EVALUATION MONITORING

Social Trends: 1981-1986

Attitudes of the American public and of organizational leaders toward privacy remained basically the same in the mid-1980s as they had been recorded in a Louis Harris survey of 1978. A later Harris survey in 1983, sponsored by Southern New England Telephone Company, found that concern over invasion of privacy, abuse of computer technology, and failure of public and private organizations to keep the sensitive personal information they collect fully confidential, was still the view of majorities of the public. Also, there was a strong willingness to use law and penal sanctions to punish willful privacy intrusions by organizations using information technology.[11]

Two other important social trends marked the early to middle 1980s. One was a rising medical, media, and public concern about the health effects of stress at the office workplace. Studies showed that stress among office workers was a contributing cause of adverse health impacts such as heart disease, and that clerical workers — because of their "high demand-low control" working situations, were among the occupations in office work most "at risk."[12] While the studies did not find that harmful stress by clerical workers was dependent on VDT use — high levels showed up in high-production, closely monitored clerical work with pre-OA technologies — the growing use of "machine paced" and "machine monitored" VDT clerical work became a major concern of stress research and scientific evaluation.

The second trend was growing public, expert, and media concern over work and workplace issues in the United States. Economic recession, heightened world competition, widespread layoffs, and uncertainties over job and career futures provided the basic dynamic behind this concern. But it was also prompted by concern over the deepening impact of office technology uses on the quality of work life — on the content and design of jobs, on social relationships in offices, on physical effects of using VDTs in inadequate ergonomic conditions, on health and safety issues raised by VDT use, and on future job opportunities as whole industries moved to convert high-volume data and telephone transactions to VDT processing. While work and its effects on people has always been an important issue in American life, the changing office workplace took on a primary importance in the lives of millions of Americans in the 1980s that it had not had, to that extent, in previous post-World-War II decades.

These social trends help to explain why VDT use, and the work monitoring issue in particular, moved onto the national public agenda in the 1982-1986 period. Specifically, national TV programs such as the McNeil-Lehrer Report[13] and ABC-TV Nightly News[14] featured programs on "Big Brother" monitoring in 1984. A stream of newspaper and magazine stories in the general press and books like Robert Howard's Brave New Workplace[15] included attacks on "VDT surveillance of workers" in their treatment of the new automated office and the social issues it presented.[16] Business magazines reported on the controversy, again with a strong focus on the work monitoring issue.[17] As union and women's activist group campaigns for VDT legislation unfolded in 15 states in 1982-84, and bills in seven states proposed bans on work monitoring, the media gave further publicity to the monitoring question.[18] And, work monitoring was treated in OTA's 1985 report on Automation of America's Offices[19] and the U.S. Department of Labor's Women's Bureau report in 1985 on Women and Office Automation: Issues for the Decade Ahead.[20]

In this growing discussion of VDT uses, concern over "harmful stress" and violations of "employee dignity and privacy" came together in the critique of "unfair work monitoring." Before analyzing this critique, however, we need to examine the nature of VDT monitoring, the extensiveness of its use in clerical work, and the major patterns of employer applications of VDT monitoring capabilities.

Monitoring Capabilities of New OA Technology

What is new about office system technology is that it is now feasible to record and cumulate the inputs of individual VDT operators on an "instantaneous" basis, and to use the software capacities of both stand-alone word processors and multi-terminal office systems to pace and guide operator performance.

- Computer technology can automatically record when operators sign on and off their terminals each work period; how long their transactions take (whether these are telephone calls, orders processed, sales made or claims adjusted); when operators leave their machines; how long the "down time" is between transactions; how many transactions are completed each day; and similar aspects of operator performance.
- Most multi-station terminal systems automatically generate detailed master records of the kind described above for each terminal and for each identified operator at that terminal. This can provide management with a documentary record for each worker by minute, hour, day, week, or month.
- Office systems can be programmed (through commercially available software or by the software designed by user employers) to "prompt" operators with audible or visible cues to keep the pace of work moving. This results in lights flashing on terminal screens or "bulletin boards" when calls are waiting, bells or tones sounding if an operator pauses too long between transactions or is away from the terminals too long, or "alert" signals being sent to supervisor terminals if operators are falling behind production quotas.

On the following pages, we reproduce two printouts that illustrate the individual-operator records that are generated from word processors or data entry machines through software programs. The first sheet, headed "IV Phase," is from the National Finance Center, Office of Finance and Management, of the U.S. Department of Agriculture.[21] It is part of an Operator Statistics System that processes data from a Four Phase mini-computer system used by a Data Preparation Unit. Programming accumulates a daily operator summary and "detail statistics" for "each batch of data entered by the operator." It also generates reports showing individual performance by operator and application, identifying proficiency level under five rankings for each operator. The daily totals are for entry and verify keystrokes, entry and verify time, and total time, calculated in hours, minutes, and seconds. A monthly performance appraisal report is generated averaging the operator's daily times.

IV PHASE
OPERATOR STATISTICS
DETAIL LISTING OF BATCHES PROCESSED BY OPERATOR
FROM 09/02/84 THRU 09/29/84

PAGE 1

DATE PREPARED 10/01/84
OPERATORS ID: CHERYL T STEWART
DATE ENTERED: 09/05/84

					ENTRY MODE STATISTICS			VERIFY MODE STATISTICS		
JOB NAME	SYS/SCNN NO.	DOC TYP	BATCH-NO COMPLETED	PROF LEVEL	TOTAL K/S	HRLY RATE	TOTAL TIME	TOTAL K/S	HRLY RATE	TOTAL TIME
PINEF	05/00	065	065021 06:16:40	5	2015	10332	00:11:42	0	0	00:00:00
PINEF	05/00	060	R60002 06:33:27	5	3212	13168	00:14:38	0	0	00:00:00
PINEF	05/00	060	060240 06:46:17	5	1179	12230	00:05:47	0	0	00:00:00
PINEF	05/00	060	060215 07:05:46	5	2276	10318	00:13:14	0	0	00:00:00
PINEF	05/00	060	060219 07:21:00	5	2557	11184	00:13:43	0	0	00:00:00
PINELIST	05/00		060247 07:28:49	2	701	5923	00:07:06	0	0	00:00:00
PINEF	05/00	130	013056 07:34:49	5	706	14120	00:03:00	0	0	00:00:00
PINEF	05/00	130	013055 07:37:55	5	723	16792	00:02:35	0	0	00:00:00
PINEF	05/00	190	090080 07:38:56	5	93	17620	00:00:19	0	0	00:00:00
PINEF	05/00	309	038041 07:40:58	5	252	10080	00:01:30	0	0	00:00:00
PINEF	05/00	115	090072 07:42:07	5	195	16712	00:00:42	0	0	00:00:00
PINEF	05/00	110	010071 07:50:40	5	1273	9546	00:08:00	0	0	00:00:00
PINEF	05/00	095	095070 07:56:17	5	1201	15526	00:04:37	0	0	00:00:00
PINEF	05/00	095	R95001 08:10:52	5	145	16836	00:00:31	0	0	00:00:00
PINEF	05/00	130	R13001 08:12:06	5	175	13124	00:00:48	0	0	00:00:00
MISPAY	05/00		U6394 08:23:47	3	1424	8111	00:10:32	0	0	00:00:00
MISPAY	05/00		U6329 08:25:03	5	189	14790	00:00:46	0	0	00:00:00
MISPAY	05/00		U6328 08:26:38	5	185	14170	00:00:47	0	0	00:00:00
MISPAY	05/00		U6393 09:04:15	2	3884	6239	00:37:21	0	0	00:00:00
AD838INV	05/00		H2162 09:14:38	5	1910	16768	00:06:50	356	14240	00:01:30
AD838INV	05/06		H2161 09:24:15	5	1849	15516	00:07:09	349	12564	00:01:40

The second printout presented as an illustration is one recording the work of word processors in an Oregon State Government agency who prepared or revised letters and documents for their department. (This was used as evidence in a discipline case that went to arbitration, and will be discussed later in this report.) The printout contains a document number ID; a code for each operator comprised of the unit she works in (ADJ), the type of document (TC - telecommunication, for example); and finally the initials of the operator. The "unit" refers to the specific work station the operator was using. "Activity" indicates the kind of work done on the document. The last column, "Keystrokes," is a cumulative count of all keystrokes made in the course of working on that document.[22]

July 11 through July 22, 1983 | Unit 32

	Operator	Unit	Activity	Date	Time In	Time Out	Work Time	Pages	Key Strokes
W	ADJTCJS	32	Creation	07/21/83	10:42	10:43	01	1	58
W	ADJNMJS	32	Creation	07/21/83	10:42	10:44	01	2	9
W	ADJNMJS	32	Creation	07/21/83	10:45	10:46	01	4	15
W	ADJNMJS	32	Creation	07/21/83	10:52	10:56	03	4	215
W	ADJTCJS	32	Creation	07/21/83	10:57	11:00	02	1	185
W	ADJTCJS	32	Creation	07/21/83	11:00	11:02	01	1	339
N	ADJOLJS	32	Edit	07/21/83	11:06	11:06	01	2	578
J		32	Edit	07/21/83	11:06	11:07	01	10	310154
W	TCB816	32	Creation	07/21/83	11:07	11:08	01	3	2
		32	Edit	07/21/83	11:09	11:11	02	26	41154
		32	Edit	07/21/83	11:12	11:14	02	42	74096
		32	Creation	07/21/83	11:15	11:17	02	26	8835
		32	Creation	07/21/83	11:18	11:19	01	69	30650
W	TCB819	32	Creation	07/21/83	11:19	11:20	01	3	2
V	TCB818	32	Creation	07/21/83	11:21	11:21	01	3	6
W	ADJNMJS	32	Creation	07/21/83	11:21	11:25	03	22	39
N	ADJMAJS	32	Edit	07/21/83	11:24	11:25	01	14	3846
J		32	Edit	07/21/83	11:24	11:26	01	10	397006
W	ADJNMJS	32	Creation	07/21/83	11:25	11:47 → lunch	21	22	2957
N	ADJMAJS	32	Edit	07/21/83	11:57	12:00	02	11	1642
J		32	Edit	07/21/83	12:00	12:00	01	10	397205
W	ADJTCCW	32	Creation	07/21/83	13:00	13:00	01	1	159
W	ADJNMJS	32	Creation	07/21/83	13:00	13:01	01	6	2234
J		32	Edit	07/21/83	13:00	13:01	01	10	310253
J		32	Edit	07/21/83	13:01	13:02	01	10	310278
W	ADJNMJS	32	Creation	07/21/83	13:03	13:13	10	23	4295
W	ADJNMJS	32	Creation	07/21/83	13:13	13:26	12	23	4566
W	ADJNMJS	32	Creation	07/21/83	13:27	13:31	04	23	4652
J		32	Edit	07/21/83	13:31	13:32	01	10	310351
W	ADJMEMOJS	32	Creation	07/21/83	13:39	13:44	05	3	375
J		32	Edit	07/21/83	13:45	13:45	01	10	397656
W	ADJTCJS	32	Creation	07/21/83	13:45	13:49	03	1	246
W	ADJNMJS	32	Creation	07/21/83	13:57	13:59	01	17	19
W	ADJNMJS	32	Edit	07/21/83	14:00	14:01	01	6	2356
J		32	Edit	07/21/83	14:01	14:02	01	10	397871
W	ADJNMJS	32	Creation	07/21/83	14:01	14:16	14	14	336
J		32	Edit	07/21/83	14:15	14:16	01	10	398091
W	ADJTCJS	32	Creation	07/21/83	14:16	14:17	01	1	26
W	ADJNMJS	32	Edit	07/21/83	14:21	14:23	01	16	375
W	ADJNMJS	32	Edit	07/21/83	14:24	14:29	04	4	434
J		32	Edit	07/21/83	14:28	14:30	01	10	398419
W	ADJNMJS	32	Creation	07/21/83	14:30	14:32	02	2	175
J		32	Edit	07/21/83	14:33	14:33	01	10	398446
N	ADJTCJS	32	Creation	07/21/83	14:33	14:37	03	1	252
W	ADJTCJS	32	Creation	07/21/83	14:39	14:39	01	1	28
W	TCB833	32	Creation	07/21/83	14:39	14:40	01	2	2
W	TCB834	32	Creation	07/21/83	14:39	14:41	01	3	2
W	ADJNMJS	32	Creation	07/21/83	14:40	14:41	01	2	180
W	ADJTCJS	32	Creation	07/21/83	14:42	14:43	01	1	2
W	ADJTCJS	32	Creation	07/21/83	14:42	14:43	01	1	24

Employer Incentives To Use VDT Monitoring Capabilities

The early 1980's was a time in which a combination of external and internal factors invited managements moving into OA to consider applying the monitoring capabilities of office systems technology to intensive VDT production work. The recession meant that producing products and services at greatly reduced costs, and reducing "headcount" were management imperatives. Setting ambitious production quotas for data entry, claims processing, word processing, and customer-service operations and "policing" these through detailed operator performance records seemed a major way to cope with recession pressures. Government agencies facing budget slashes had similar incentives.

At the same time, deregulation meant that many businesses had to lower costs drastically to compete both with lean, young entrants in their own industries and large, powerful firms from other industries who were now "raiding" their preserves. Established airlines, for example, had to cut reservation processing costs to meet the competition of new, low-salary and non-union air carriers. Local banks now had to compete with out-of-state banking institutions, while banks, insurance companies, brokerage houses, and large retail chains were now in sharp competition for the public's investment dollar. Competition from foreign firms added a final challenge to some firms, though this was not as common in office work as in industrial settings. In our site visits, we found that pressure to lower information processing costs because of all these "new competitive pressures" was the most common reason given for applying production quotas and monitoring to intensive VDT work. This was especially true as we will discuss in a later section, of AT&T in the period of the late 1970s, and especially from 1980-1983.

Finally, organizations that spent large sums of money on terminals and office systems generally did so because the vendors promised extensive improvements in productivity, and advocates of OA expenditures inside the organization had set out detailed plans documenting how such productivity gains would be achieved. Given the reality that changeovers to new OA systems almost invariably meant disruption of routines and working group rhythms, and that frequent downtime of OA systems was common, there was a built-in "upset" factor in the first stages (often months to years) in most large OA applications. In many sites we visited, this led to pressures on group or division or bureau managements to "get production up," and that pressure was passed on directly to unit managers, who passed it right along to supervisory staffs. With their own performance ratings, bonuses, promotions, and careers riding on "payoff performance" from the new OA equipment, supervisors leaned on clerical workers doing the most intensive VDT work to produce more, faster.

Since many organizations already used production quotas and work monitoring in the pre-OA era, these had little trouble in applying their basic philosophy with the newly-enlarged capacities of VDT systems. Some firms we visited that had not used work monitoring in the pre-OA period adopted this practice in their OA clerical operations, both for "competitive pressure" and "new opportunity" reasons. At the same time, most organizations we visited which had a personnel philosophy that did not accept production quotas and work monitoring in the pre-OA era did not abandon that approach just because they plugged in word processors or telecommunication terminals for customer service work. (We will give examples of these policies later.)

How Extensively is VDT Work Monitoring Being Used?

There are no trustworthy figures on how extensively employers are applying VDT based software to monitor individual operator performance and use this to make individual judgments on pay, promotion, or discipline. No one has such figures, and no available basis for calculating them is at hand. When we read a recent magazine article that quoted NIOSH as having estimated that the two-thirds of 7 million employees using VDTs in the U.S. are being "electronically monitored" by their employers,[23] we contacted Dr. Michael Smith of NIOSH. He stated that he had never made such a statement and that he knew of no NIOSH study or report that had ever made such an estimate. His opinion is that no-one has reliable figures on the extensiveness of individual VDT evaluative monitoring.[24]

What we can provide to OTA is a series of empirical observations we have made or collected on particular subsets of the employee population, and, from these, suggest some ball park figures as to how widely VDT monitoring may be going on overall.

VDT Site Visits Made by the Educational Fund

The Educational Fund visited 110 business, government, and non-profit organizations in a VDT field study during 1982-84.[25] The following describes how we found VDT monitoring capacities being used:

- The great majority, in the 80-90% range, were collecting some operator statistics for at least some of their clerical workers, using the most production-oriented segment of their VDT work. Those not collecting statistics at all were usually organizations using older word processing or micros that did not have software for extensive monitoring; organizations with new applications in early implementation; non-profit organizations (especially universities) who "just don't do that;" and some state and local government agencies which "saw no need to compile those records."

- Of those collecting individual statistics, about a quarter said they used these only for assessing group performance, to plan for handling peaks and valleys of work demand, and to cost-justify their use of the office systems.
- The remaining three-quarters are using individual operator statistics to make some sort of individual-operator evaluation. This ranged from "we use it to spot the need for more training" to those who based standard pay, incentive pay, or promotion on the machine records, with some saying it was "almost the entire basis" for such judgments and others saying it was "one factor in five or six factors used to evaluate performance."

In the last half of 1985 and the first quarter of 1986, the Educational Fund went back to the 110 sites originally visited for an update of the VDT policies and practices. We found no increase in the percentage of employers using monitoring for some kind of personnel evaluation (this remained about 75%). But a majority of these now reported that they had created a "more formal system" for setting work standards and letting employees see the results of monitoring if they wished.[26]

In 1986, 9 to 5, the National Association of Working Women, published a pamphlet-report on Computer Monitoring and Other Dirty Tricks.[27] In estimating how much monitoring is taking place ("Who Is Monitored"), this report states:

> Professor Alan Westin of Columbia University surveyed data processing, word processing, and customer service operations in 110 worksites and found that 98% were using computers to continuously track workers' movements.

The citation given was to the Fund's published report, The Changing Workplace: A Guide To Managing The People, Organizational, And Regulatory Aspects Of Office Technology (1985).[28] At no point in the chapter on "Work Standards and Performance Monitoring" is it stated that "98%" of employers we studied "track workers' movements." What is stated is that "Almost every one of the 110 organizations we visited is using the work monitoring capacities of VDTs to collect some quantitative data on the performance of employees in data-entry, word processing and customer-service functions..."[29] We then went on to note that some employers used the data for studying peaks and valleys of load, some to set work-group norms, some to identify employees for supplementary training, and some to calculate performance ratings for pay, promotion, or assignments.[30] This is quite different from citing our study for the proposition that "98%" of employers are using computers "to continuously track workers' movements."

9 to 5 VDT Hotline Callers

9 to 5, the National Association of Working Women, initiated a "Campaign on VDT Risks" in May of 1983, which included a nationally advertised "Hotline" that VDT operators were invited to call to discuss their experiences. Within six months, 6,000 calls had been received, two-thirds (about 4,000) from VDT users. (The rest were from supervisors, employers, and others.) Of 6,000 questionnaires sent to Hotline callers, 873 were returned, and these were analyzed by the 9 to 5 organization. They point out that this is not a representative sample of office workers in general or VDT users in particular, but is "instructive in pinpointing the typical uses and effects of VDTs among a wide variety of users."[31]

Sixty-two percent of the Hotline respondents were clerical or secretarial workers. (The rest were professionals, supervisors, managers, or others.)

> 79% have worked with VDTs over a year and now do so over 4 hours a day.
>
> Only 11% of the total respondents say the speed of their work is controlled "mainly by computer." (65% say they control their own work; 10.5% mainly by the supervisor; and 16% by "both supervisor and computer." 35% say their work is "measured by the computer," while 54% say it is not, and 11% don't know if it is).
>
> Only 28% say they have a "required amount of work to produce." 72% say they do not. Of the 28% that have work quotas, 91% say they receive extra pay or incentives when they produce more than that amount. Only 5% say they lose pay when they fail to produce their quota.

9 to 5 National Survey on Women and Stress

A national survey on women and stress was conducted by 9 to 5 in late 1983. Respondents were 40,000 readers of four major women's magazines -- Working Woman, Ms., Glamour, and Essense (the latter a primarily black readership audience).[32] While these magazines have generally middle class readerships, the occupational roles of the total respondents and the subsample created for analysis provide a group of office workers whose responses are worth noting. It was clearly not a representative sample (being reader-volunteers) and it almost certainly under-represented lowest-level data-entry workers, part-time and temporary clericals, and lower-paid black, Hispanic, and oriental women.

Forty-three percent of the 4,500 responses selected for analysis reported that they were using VDTs, CRTs, word processors, or PCs. Of these users, 25% were in managerial jobs, 30% were professional and technical workers, and 44% were in "clerical" posts. The survey combined secretarial, customer-service, data-entry, and other similar functions to make up its "clerical" category.

One question on the survey asked: "Is your work measured, monitored, "constantly watched" or "controlled" by machine or computer system?" 17% of all OA users, about one in six respondents, said yes and 83% said no. Of "clericals," 20% (one in five) said yes and 80% no. (15% of "managers" and 13% of "professionals and technicals" also say their work is monitored or measured by machine.)[33]

In terms of intensity of use, two out of five of the total OA users were using their machines 50% or more of their time per week, with clericals the largest users, professionals next, and managers the least.

Overall Estimate

Looking over these very diverse surveys and field observations, and recognizing their limitations, we believe two overall inferences can be drawn, as a backdrop for this report:

- The great majority of clerical employees working on VDTs -- in the 65-80% range — *are not presently monitored by machine and evaluated for pay, promotion, or discipline on that basis*. Assumptions that most employers using VDTs are monitoring most of their clerical workers are *not warranted.*
- However, if 20-35% of clerical employees using VDTs *are* being monitored, this means several million employees are being evaluated in this manner. This is a substantial population of workers, and a number that could grow steadily larger in the next 5-10 years. Therefore, social attention to how VDT monitoring is being carried out among clerical workers is certainly warranted.

Factors Explaining Differences in Managing VDT Clerical Work

As we noted in summarizing use levels from our site visits, a majority of organizations are collecting individual operator statistics for some of their clerical applications. Organizations then divide into three camps: (1) those that use these only for group evaluation, planning, and cost-justification analyses; (2) those that apply traditional, supervisor-driven performance monitoring; and (3) those that have developed "fair performance measurement" approaches. We turn in this section to a discussion of factors that explain these variations.

As was true in the pre-OA era, and we will see to have continued in early use of office systems technology, organizations have not faced many external constraints thus far in their decisions whether to use or not use VDT work monitoring. There are no federal or state laws or common law judicial decisions governing employer use of evaluative monitoring, apart from the advance notice and record-access rules set by some state public utility commissions for telephone/telecommunication service monitoring. Under both government and private labor relations law, and arbitrator rulings, the decision to adopt and use individual work monitoring is a "management right," not required to be bargained for in unionized settings.* Grievance appeals place few limitations on unionized managements either, unless the monitoring is used to conduct surveillance on union organizers or officials. As for executive-level rules for government agencies, through civil service or personnel regulations, we found no municipal, state, or federal limitations against conducting individual work monitoring.

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* As of May, 1986, we are not aware of any labor contract negotiated in the U.S. that forbids the employer to use individual work monitoring. (See the SEIU-Equitable contract discussed later for an example of negotiated procedures as to standards and employee access to measurement data.)

Recognizing that non-telephone VDT jobs are not affected by external legal or regulatory constraints, what explains the variations among employer organizations that we have described?

Based on our site visits, and other materials collected for this report, we believe that variations among organizations arise from the following factors:

- First and foremost is management philosophy. Within the same industries and among similar government agencies, adoption of work monitoring and variations in how this is used flow primarily from top mangement's approach to personnel administration and operational style. We found organizations with virtually identical clerical operations and OA applications that did and did not use individual work monitoring, or used it in significantly different ways. Put another way, how managements approach motivating and rewarding employees, including clerical employees, is a critical element in how OA technology will be used by that organization.
- Second is the nature of the work being done and its perceived role in the operations of the organization. The more "routine" the clerical function is perceived by management to be, and the

more decisive its costs are seen as being to the profitability of the business or service-delivery in government, the more likely it will be that work monitoring will be used. In many organizations, therefore, work monitoring is used only for those operations and not for other clerical applications of OA, and not for secretarial, professional, technical, and management work.

- Third is the nature of the organization's operations. The more a clerical function is a vital part of an organization's central business -- customer service in airlines, utilities, telephone companies, hotels, credit-card firms, insurance claims processing, and comparable functions in government tax, licensing, social services, and law enforcement agencies -- the more likely it is that most organizations in this situation will set formal work standards, monitor individual performance, and use this for personnel administration. Where a clerical function is not central, but is more of a general administrative support function in offices, monitoring can be regarded as not "necessary" for such operations by this organization.
- Fourth is the specific approach being taken by each organization toward OA technology as an instrument and a process. There are some managements that believe the adopting OA for routine clerical work "dictates" individual monitoring, partly because capital costs must be recovered by greater productivity and partly because the presence of a technological capability -- generation of individual records on a continuous basis -- represents an enhancement of management supervision and worker control that it would be "foolish"

to reject. Other managements believe that such uses would violate their organizational culture and decline to accept a technological imperative.

- Fifth, is the perceived employee response. If managements assume that clerical employees do not mind and can live with close individual monitoring (and those that mind can easily be replaced); if the quality of work does not seem to suffer unfuly; and if no employee subotage on the job is likely, then such managements may see "all plus" and "no minus" in using monitoring.
- Sixth is the quality of labor-management relations in union-represented organizations. Some managements do not use evaluative work monitoring because they say they do not want to risk conflict with local and national union officials by doing this.* In other cases, how monitoring will be conducted is affected by either adversarial labor relations (as in the telephone industry) or by cooperative relationships (as in several federal agencies discussed later). Furthermore, some non-union companies we visited said a major factor in their decision to reject operating-management proposals to do work monitoring was a belief that this could "give union organizers a good issue."
- Seventh, the financial condition and resources of the organization bear on the decision. Though all organizations today face budget constraints and pressures to work more efficiently with limited resources, some organizations are much better equipped with revenues and skilled staffs than others, and some organizations skate on the thin ice of survival as their basic condition. In those pressured organizations using close work monitoring will be seen as "not an open question."

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* See the effects of union representation on supervisory behavior in two organizations reported by Elaine Eisenman in the Supplement to this report, titled: Employee Perceptions and Supervisory Behaviors in Clerical VDT Work Performed on Systems That Allow Electronic Monitoring, Report to OTA, April, 1986.

- Eighth is the public milieu. Some business organizations are significantly concerned with their public reputation as enlightened and "progressive" employers. They believe this helps them recruit the best new employees and attract customers, and helps the organization in its relations with regulators, public policy makers, and the media. Anything that is likely to give the organization a "sweat-shop" or "Big Brother" image is looked at very carefully by such image-conscious firms, especially if strategic activist groups and trends in media attention highlight the potential "negative exposures" from such conduct.

What this list suggests is that whether organizations do or do not use work monitoring, at all or for a given clerical function, is dependent today on a combination of management-philosophy and situational factors. In the early stages of OA adoption (1976-1982), the external environment for deciding to use work monitoring was almost wholly permissive. However, as we will see, recent changes in the external environment and in the concerns and attitudes of clerical employees within organizations may be altering the milieu within which organizations are operating, and may affect decisions as to work monitoring in the future.

Work Monitoring in the Federal Executive Branch

Sources for this Discussion

The Educational Fund included federal executive agencies (both civilian and military) among VDT-project sites visited in 1982-1984. Seven agencies were visited, with sub-units visited within some of these. In addition, we addressed a letter of inquiry to 78 federal agencies, bureaus, or departments in September of 1984, using a list of ADP executives in these agencies supplied to us by OTA. One area we asked about was whether the agency had any policies or procedures relating to the measurement of work performance by individual VDT/CRT operators. As of December 31, 1984, 44 agencies had responded by letter and accompanying documentation. We conducted follow-up telephone interviews with 12 of these reporting significant activity relating to work monitoring. The list of 44 responding agencies appears in Figure 1.

Figure 1. FEDERAL AGENCY RESPONSES TO PROJECT LETTER ON VDT WORK MONITORING (44)

Adv. Comm. on Historic Preservation
American Battle Monuments Commission
Bureau of Labor Statistics
Commission for Purchase from the Blind
Commission on Fine Arts
Commodity Futures Trading Commission
Department of Agriculture
Department of the Army
Department of Commerce
Department of Defense
Department of Energy
Department of Health and Human Services
Department of Housing and Urban Development
Department of the Interior
Department of Justice
Department of Labor
Department of Transportation
Department of Treasury
Environment Protection Agency
Equal Employment Opportunity Commission (EEOC)
Executive Office of President
Farm Credit Administration
Federal Communications Commission
Federal Deposit Insurance Corp.
Federal Energy Regulatory Commission
Federal Reserve Board
Foreign Claims Settlement Commission
General Services Administration
National Aeronautics and Space Administration (NASA)
National Bureau of Standards
National Capitol Planning Commission
National Commission on Libraries and Information Service
National Endowment for the Arts
National Science Foundation
National Transportation Safety Board
Office of Personnel Management
Panama Canal Commission
Railroad Retirement Board
Selective Service System
Small Business Administration
Tennessee Valley Authority (TVA)
U.S. Information Agency
U.S. Merit Systems Protection Board
Veterans Administration

We also conducted interviews with staffs at the national headquarters and in some local areas for labor unions representing federal employees. These included: American Federation of Government Employees; National Association of Government Employees; National Federation of Federal Employees; National Treasury Employees Union; and American Postal Workers Union.

The Federal Government as an OA User

A useful point to discuss at the outset is the position of the federal executive branch as an OA user, compared to the corporate and non-profit sectors. An often asserted judgment is that the corporate sector is, on the whole, "ahead of" the federal executive branch in installing OA. While this may be true if one uses measures such as percentage of word processors per secretary across the federal system compared to Fortune 500 business firms, we do not believe it is correct in terms of pursuing advanced applications. From our site visits to 110 private and public sector organizations, the responses to our inquiry into OA activities at federal agencies, and other sources, we think the situation is more complex than this assertion captures:

(1) Some federal agencies are significantly behind their counterparts in the private sector in both percentage of occupational groups with OA equipment and in advanced applications. Such was the judgment, for example expressed to us by the Federal Reserve Board, in comparing its OA work with leading banks and financial institutions.

(2) Some federal agencies, or units within them, are clearly at the frontier in automating units such as customer-service or in specific OA applications. Examples are the IRS, several military agencies, the Executive Office of the President, and 8-10 other federal organizations.

(3) Many other federal agencies are in a "mainstream" of OA use by both penetration of machines and types of uses that compares closely to the mainstream of most industries, in which it is only a minority of firms that are doing the advanced OA work featured in the media or computer periodicals.

In short, we think it is a mistake to place the federal executive branch as a whole "behind" any other sector of the organizational community in the United States. There are advanced applications being pursued in many federal agencies, plus a drive for integration of information activities through Information Resource Management approaches, that is quite comparable to leading-edge activities in the corporate sector, and is probably ahead of most areas of the non-profit world.

The Overall Labor Relations and Personnel-Policies Setting in Federal Agencies

Federal labor law doctrines hold that applying work measurements and using these to evaluate employees are management prerogatives, not policies required to be negotiated with unions representing federal employees. This falls under the "Management Rights" clause of the Civil Service Reform Act of 1978. (Federal Code, Title V, Section 7106(a) (A) and (B). However, managements at the agency or local level can, if they wish, bring the union into the work standards and measurements process. Federal union officials we interviewed stated that attempts had been made to raise the monitoring issue at some federal agencies that have heavy, all-day VDT work and use individual monitoring policies, but these had been rebuffed as "non-negotiable" under the "management rights" clause. Arbitration rulings have upheld agency managements when work monitoring has been challenged, for example, in the Social Security Administration.[34]

Federal unions have adopted bargaining guidelines or model contract provisions on VDTs which they distribute to local bargaining committees or use in agency-wide negotiations.* Despite the "management rights" situation, these union guidelines address work monitoring. The American Federation of Government Employees includes in its current list of VDT contract demands, under "Introduction of Technological Change," the demand that there be "No Monitoring: There will be no machine pacing. There will be no machine monitoring on an individual basis."[35] The National Association of Government Employees includes opposition to monitoring in a list of "VDT protections" it recommends for federal agencies as "health and safety measures," to be used "while research is conducted and long-term solutions are developed" to VDT effects. Their position is that "Stress-inducing features of automated jobs such as machine pacing or computer monitoring should be eliminated."[36]

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* Our main discussion and analysis of union positions will appear later in this report.

While no contracts that we have heard of have adopted such provisions, unions report that they are raising the monitoring issue in joint labor-management committees on health and safety; as part of filing worker compensation claims for employees experiencing harmful effects from intensive VDT use; and in grievances focused on unfair working conditions. And, several unions said they would try to raise the work monitoring issue directly in new contract negotiations in 1985-86, though it would take a "creative approach" to get by the "management rights" clause.[37]

In terms of executive-branch regulations, there are no central rules set for work monitoring by federal agencies by the Office of Personnel Management or General Services Administration, nor is there any presidential executive order governing employee work monitoring. Each agency is free to adopt work measurement and performance evaluation policies for VDT operators as they wish, as long as these do not violate overall federal personnel policies.[38]

Monitoring of VDT Telephone Work

Our pre-OA baseline account (Appendix Item 1). suggested a distinction has to be made in a privacy-oriented analysis between telephone-based VDT work by customer service operators, where conversations with the public are involved, and situations where employees are handling manual or digital data by VDT. As far as telephone-monitoring is concerned, interviews we conducted with General Services Administration officials as late as 1985 indicated that GSA "still had under consideration" the issuance of the same proposed regulation for telephone-service monitoring by federal agencies that we reported it was "considering" in 1978.[39] "Work is still being done on what rules and guidelines to issue," we were told, with four possible rules presently under consideration:

(1) Agencies would have to publish their rules and procedures for doing service monitoring of telephone-VDT systems.

(2) A log of uses made of service monitoring would have to be kept.

(3) A proper notification of the public would be required.

(4) Approval of GSA would be required.

Service monitoring of VDT-based public or client telephone calls is widespread in 1986 by the same agencies that we reported doing this in 1978. For example, the attached sheet indicates how IRS notifies taxpayers that service monitoring is taking place:

Department of the Treasury
Internal Revenue Service
HOLTSVILLE, NY 00501

If you have any questions refer to this information:

Date of This Notice: AUG. 13, 1984
Social Security Number:
Document Locator Number:
Form: 1040 Tax Year Ended: DEC. 31, 1983

Call: 732-0100 BRONX.MNHTN.,ST.ISLD.
997-1510 ROCKLAND COUNTY
or 997-1510 WESTCHESTER COUNTY
Write: Chief, Taxpayer Assistance Section
Internal Revenue Service Center
HOLTSVILLE, NY 00501

If you write, be sure to attach this notice. Include your telephone number and the best time to call.

AMENDED RETURN ACKNOWLEDGMENT

WE RECEIVED YOUR AMENDED RETURN FOR THE TAX YEAR INDICATED ABOVE.

WE WILL REVIEW YOUR RETURN AS SOON AS POSSIBLE. SINCE WE HAVE A LARGE NUMBER OF SIMILAR REQUESTS, IT MAY TAKE AS LONG AS 3 MONTHS BEFORE YOURS IS PROCESSED. WE APOLOGIZE FOR ANY INCONVENIENCE THIS DELAY MAY CAUSE YOU.

YOU WILL RECEIVE A NOTICE FROM US REGARDING THIS TAX YEAR WHEN THE CHANGE HAS BEEN COMPLETED.

IF YOU HAVE ANY QUESTIONS, YOU MAY CALL OR WRITE US -- SEE THE INFORMATION IN THE UPPER RIGHT CORNER. TO MAKE SURE THAT IRS EMPLOYEES GIVE COURTEOUS RESPONSES AND CORRECT INFORMATION TO TAXPAYERS, A SECOND IRS EMPLOYEE SOMETIMES LISTENS IN ON TELEPHONE CALLS.

In some federal agencies we visited, telephone monitoring is done for "checking courtesy" and "correctness of procedures" but not to measure compliance with production standards. For example, the Department of Transportation has a large, nationwide "hotline" service for members of the public to call to ask whether their automobile has been recalled for correction of defects, and other types of automotive information.[40] An official at DOT noted that employees are told that supervisors listen in for courtesy and correct-procedure checks, and employees know this is part of the employee's performance evaluation. However, speed and quantity of calls are not monitored. The official explained:

> "We have not set specific performance standards for operators in terms of how quickly they should get information out to callers -- like 45 seconds. Partly, this is because we know we have peaks and valleys of use, and it isn't easy to standardize parameters. But partly this is because the Carter and Reagan Administrations have not wanted to treat this citizen service like a private business, and feel it is important to let the operator talk with the caller for any reasonable amount of time to handle the problem."

Overall, in our site visits, our federal-agency telephone interviews, and our federal-union contacts, we did not hear of either union complaints or employee discontent over close and stress-inducing VDT-based telephone-service monitoring. Certainly, nothing was raised resembling the protest by the Communication Workers against "stress-inducing" monitoring of directory operators by the Bell System in the 1970s and early 80s. It is the data entry and claims processing functions in some federal agencies that have been the focus of employee and union protest, to which we now turn.

Varieties of Federal-Agency Monitoring Practices in Data Processing

As we noted for all employment sectors in our previous section, whether individual operator monitoring will be done vary even within one industry or governmental sector according to the type of VDT job, the role it plays in the agency, the personnel philosophy of the organization's management, the state of labor-management relations, and similar factors. Our site visits demonstrated this varied pattern among federal agencies.

1. Some Agencies Collect No Statistics At All For Clerical VDT Operators

Some federal agencies, usually the smaller ones without heavy data entry or customer-service operations, state that they collect no production statistics at all for clericals using VDTs. The Federal Communications Commission, for example, explains:[41]

> Since we are basically a small agency, we have not attempted formal studies for measuring work performance by terminal operators. Evaluation of all our employees is primarily based on the ability of all staff elements to meet specific agency objectives as defined by management.

Other agencies, just moving into OA applications, indicated they did not plan to install individual monitoring. The information management officer at the National Endowment for the Arts commented.[42]

> There is something particularly Orwellian about automated data-gathering techniques which are initiated, perhaps even with good intentions, to assess an employee's 'productivity' and end -- quite easily -- by monitoring the employee's daily comings and goings. I'm even more concerned about the inevitable next step (backward): the possibility of paying employees -- especially non-union employees, and most especially lower-graded minority and female employees -- by the piece. This smacks too much of a return to a situation the social ramifications of which began to ebb only at the turn of this century.

In other cases, we were told that work monitoring was not done for clerical VDT operations at particular offices or sub-units of agencies we contacted. The Office of Computer Sciences at the Small Business Administration, for example, stated that "policies and procedures designed specifically for evaluating and measuring work performance of individual Video Display Tube/Cathode Ray Tube operators are not the methods of performance measurement currently used by this office."[43]

Most agencies indicated that they had no agency or department wide policy on VDT work monitoring, but left this to local-unit option. As the Department of Labor put this: "Individual organizational units or managers may use such measurements for evaluating performance. As we work to improve productivity, quantified measurements of all sorts are examined for possible use."[44]

2. Some Agencies Collect Statistics But Do Not Use These For Individual Evaluation

Some federal agencies collect production statistics by individual operator but do not use this for calculating individual operator payment or performance. At the Federal Reserve Board, individual operator keystrokes and error rates are collected from employees in data entry, but this is used only for documenting service charges to be paid by divisions using the data entry services. "It is not linked to operator payment," the agency reports. "Our focus for performance is on achieving a standard adequate work unit, with proper quality, and we feel no need to use individual operator statistics to accomplish that."[45]

3. Some Agencies Use Individual Evaluative Monitoring and Report Good Employee Response

A good example of the collection of individual statistics and use for personnel evaluation comes from the Department of Agriculture's National Finance Center data entry unit, whose printouts of operator keystrokes and time we used as an illustration in Section VIB. In a report on how these statistics are used, the Department stated:[46]

> The Data Preparation Unit works primarily on a self-evaluating program for two critical elements: 1. Type Data Entry and 2. Time on the CRT Machine. In addition, there are two noncritical elements operators are rated on. This reporting system affects the pay of each individual operator. The operators must maintain an Acceptable level (3) or above for a 12-month rating period to be eligible for a Within Grade Increase (WGI). Anything below a 3, the WGI is withheld until the operator can satisfactorily meet and maintain the 3 level.
>
> The same principle applies for any operator recommended for a Quality Step Increase (QSI). The operator must maintain an Exceeds Acceptable (4) or better and have an overall performance average of 4.3 or better during a 12-month rating period. No element can be below a 3.

> In summary, the PRSM system has been used in the Data Preparation Unit for 5 years. Supervisors and operators are satisfied with the system. Productivity has increased along with employee morale, because the individual has the opportunity to review their performance in relation to their standards on a monthly basis.
>
> A PRSM report is produced monthly for each operator. Immediate supervisors review the reports with the employees and prepare a monthly performance report for the Section Supervisor. The performance report consists of all four elements the employee is rated on. This determines the employee's performance rating when due. By doing a monthly review, the employee knows what level they are performing and what can be expected on their yearly performance appraisal.

At many of the agencies we surveyed, officials stated that individual work standards were negotiated between the supervisor and the individual employee as part of the regular setting of performance goals for each employee, under Office of Personnel Management guidelines. For example, the U.S. Information Agency reported that their "employee evaluation process requires the setting of individual performance goals each year," and this is done "jointly by the supervisor and employee." They "consist of performance standards appropriate to each job," and, in the case of VDT work, "could include volume or volume and quality measures of VDT/CRT production."[47]

Some federal agencies report that their union contracts provide that employees will receive written performance standards pertaining to their job, so that they will know what they are expected to accomplish in a day's work. This would include the number of claims to be processed per day, the number of pieces of correspondence to be produced, etc. in order to receive ratings such as "fully satisfactory," "outstanding," "below satisfactory."

4. Agency Monitoring Practices That Have Generated Controversy

When federal union officials are asked about VDT monitoring in the federal government, the picture they paint is one of "a few bad places, and very bad -- in the sweatshop mold."[48] Examples given were the "production shops" at agencies like "Department of Education," "Labor," "Treasury," and -- the most widely cited -- "the Social Security Administration." "The Postal Service" was also cited by union officials as a "terrible monitoring environment."

(1) The Social Security Administration

The Washington Post, on September 3, 1984, ran the following profile of work monitoring in SSA's data entry operation in Wilkes Barre, Pennsylvania.[49]

Rising Performance Standards Keep Some in Agency on Edge

In the Appalachian coal country of Wilkes Barre, Pa., one of the largest and busiest factories in Luzerne County produces a product unlike those of neighboring industrial workplaces: millions of bits of electronic data.

There, about 1,000 federal workers, almost all women, transcribe facts and figures from 131 million W-2 payroll forms a year into the computer banks at one of three regional data centers of the Social Security Administration.

SSA data transcription "has to be one of the most boring and tedious jobs that there is," said Joseph Corcoran, a nine-year SSA veteran. "On top of that, you might have to 'key' about 150 records an hour, and that adds to the stress."

Security measures such as employe identification codes, which the SSA originated in the 1970s to detect fraud, now lend themselves to computer monitoring of individual productivity and to the adoption of performance standards.

SSA's Motorola video terminals keep a running count, which operators can see, of the number of forms keyed that day. Daily results are entered into a second computer system that captures what the SSA calls "work experience data" used for employe evaluations.

A primary complaint about the monitoring is that performance standards are periodically changed, so that workers who were required to key 115 forms per hour now may have to do a minimum of 138, a 20 percent increase, said Corcoran, who is president of Local 2809 of the American Federation of Government Employees. In some types of work, the standards have increased 50 percent or more in the last few years, he said.

"For a small percentage of employes, the standards per hour are not really a big thing because they are fast. But for a large percentage of people, it is a big thing. When they raise the standards another 15 items an hour, it's tough to make, especially if you had trouble meeting the old standard," Corcoran said.

"So you end up sitting at the machine longer. If you have to go to the bathroom, you don't go till you make 165," he said. "People handle tension differently. While others can do the 165, go have a smoke and even get a head start on the next hour's work . . . some people are forced to work in high gear all the time. It is like a car. If you are constantly racing it at high gear, it will start to burn out. And what [management] said in effect was that if people start to burn out, then call me."

Carolyn Pekarski, a 13-year veteran at Wilkes Barre, said that in the past, overzealous supervisors have confronted workers, including her, with computer printouts that detailed the length of time lapses in which a worker failed to enter data. The printouts showed the speed of the faster and slower workers, she said, "and the supervisor will say, 'So-and-so is doing this much, why can't you?' It gets very stressful."

Corcoran said Local 2809 recently completed a health survey of 62 data transcribers and found that about half of them reported frequent complaints of extreme fatigue; neck, shoulder and back pain; eye strain and irritability. The findings mirror various federal studies of video display terminal operators whose work is considered among the most stressful of all occupations, according to the National Institute of Occupational Safety and Health.

"Most of the workers are females who happen to have a couple of kids. They have a home where they are expected to cook meals, wash clothes, deal with kids. And they say the stress they feel on the job filters into their home life, that they are not able to cope with things at home as much as they should. I think that means more domestic troubles and all sorts of troubles," Corcoran said.

Edward P. Arthur, director of the SSA office of central records operations, said that while he was not familiar with the union's health survey, the SSA is studying the health and working conditions of data entry workers in response to what he called "universal" concern about the uncertain health effects of VDT operations.

Arthur said that performance standards, drafted with the aid of the SSA's "manpower utilization" experts, are reasonable because they are aimed at the speed of typical workers.

Arthur said that since 1982 the entire Wilkes Barre work force has been able to meet the SSA minimum, and that last year, for instance, 41.5 percent of the workers received ratings that exceeded the satisfactory level.

Those whose overall performance is rated outstanding are eligible for cash awards, Arthur said. So far this year, 85 workers have received bonuses averaging $305.

Standards are changed each year, he said, because of changes in the total work load of processing every American's W-2 forms and because of technological changes that affect the speed of the work itself.

"You look at the performance you are getting for the money you are spending," he said. "If the standards are too high, experience will show it and we will lower it," he said.

The union has challenged the SSA computer-monitored performance standards under provisions of the Civil Service Reform Act, but arbitrators have ruled that the SSA's actions fell within its management rights.

—***Peter Perl***

Our conversations in 1984 with headquarters and local union officials representing employees at SSA indicated that they regarded union-management relations as "adversarial" rather than "cooperative;" some improvement was made under a Joint Labor Management Project in late 1985 but that "QWL" effort is reported by both union and management officials we interviewed to be "in trouble" in 1986.[50] The union says it has no complaint with the teleservice operations of SSA, where monitoring is not done. It is the data entry shops and claims processing operations where the union feels that "unfair" quotas and "unfair monitoring" are taking place. However, because of the "management rights" clause in federal labor relations the unions have not been able to challenge these practices directly in bargaining.

(2) The Postal Service

Though not a "federal agency," the U.S. Postal Service deserves treatment somewhere in our report, and we will put this here, in the most closely related sector for postal operations.. We will rely on Congressional hearings and published materials, plus our union interviews, for our presentation, since we did not visit the Postal Service. We were also unsuccessful in getting a Postal Service spokesman to talk with us about these issues. Therefore, OTA will want to obtain the Postal Service's comments as to its alleged practices, and charges made by the American Postal Services Union.

We begin with a Washington Post story in September of 1984, which focuses on the way that supervisory use of monitoring is used in Washington's main Post Office.[51]

The Washington Post
Sept. 2, 1984

Monitoring by Computers Sparks Employe Concerns

First of two articles

By Peter Perl
Washington Post Staff Writer

The mechanical arm seizes envelopes and shoves them onto a conveyor that moves relentlessly in front of Patricia Johnson's keyboard on the midnight shift at Washington's cavernous main post office.

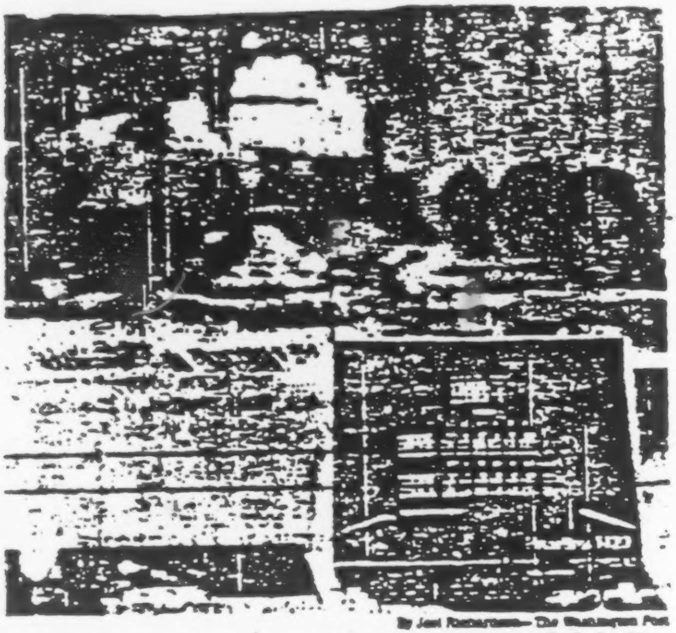
WATCHING THE WORKPLACE

At a rate of 50 letters per minute, Johnson, in a split second, must remember all the thousands of addresses within the 20017 and 20018 zip codes of Northeast Washington and must punch, by memory, the proper two-digit code to route each piece of the morning's mail to one of 70 letter carriers.

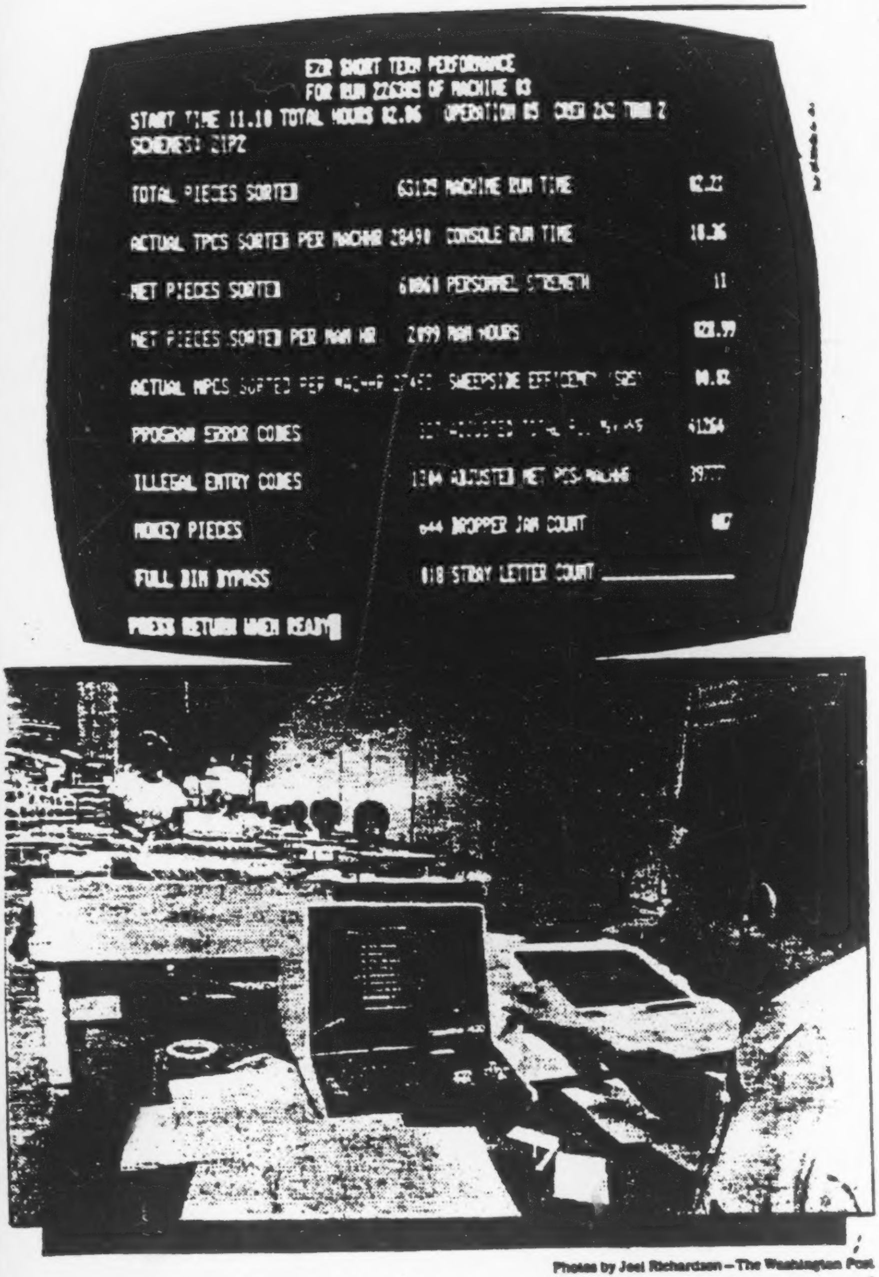
In the past, supervisors would measure her performance by watching her or examining a batch of her work. But now, her supervisor sits at a video screen, punches a computer keyboard, and can immediately see how many mistakes Johnson is making. If her accuracy falls below 95 percent for an extended period, Johnson can be fired.

"The mail is running by me and running by me, and the machine kind of hypnotizes you," Johnson said, "and this computer is looking over your shoulder, watching you. It gets very stressful . . . . The supervisor knows everything about you, right in that machine."

Johnson, 30, the single parent of an 11-year-old boy, is one of a growing number of American workers who no longer labor solely under the watchful eyes of the boss or the foreman. Now, millions of blue-collar and white-collar employes are working under the even more watchful and relentless scrutiny of the computer. . . .


By Joel Richardson—The Washington Post

Computer screen shows progress of postal employee at D.C. facility.



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EZR SHORT TERM PERFORMANCE
FOR RUN 226385 OF MACHINE 03
START TIME 11.10 TOTAL HOURS 02.06   OPERATION 05  [illegible] TOUR 2
SCHEMES: ZIPZ

TOTAL PIECES SORTED             63125 MACHINE RUN TIME          02.22

ACTUAL TPCS SORTED PER MACHHR 28490  CONSOLE RUN TIME           10.36

NET PIECES SORTED               60861 PERSONNEL STRENGTH           11

NET PIECES SORTED PER MAN HR   2099 MAN HOURS                  028.99

ACTUAL MPCS SORTED PER MACHHR [illegible] SWEEPSIDE EFFICIENCY (SE)  00.82

PROGRAM ERROR CODES             [illegible] ADJUSTED TOTAL PCS [illegible]  61264

ILLEGAL ENTRY CODES             1304 ADJUSTED NET PCS-MACHHR    [illegible]

HOKEY PIECES                     044 DROPPER JAM COUNT            007

FULL BIN BYPASS                  018 STRAY LETTER COUNT ___________

PRESS RETURN WHEN READY
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Photos by Joel Richardson—The Washington Post

EDIT computer is used by postal officials to analyze workers' speed and accuracy and discover problems. Employes often don't know when supervisors are monitoring them.

High-Tech Tensions

Patricia Johnson came to the Washington post office 12 years ago. She has long since mastered her job, she believes, and she usually has an accuracy rate of about 99 percent at the 50-per-minute pace of the letter-sorting machine. But as she sits in a row of 12 mechanical sorting machines—with a supervisor at the video screen monitoring her and the other operators—the tensions can be maddening, she said.

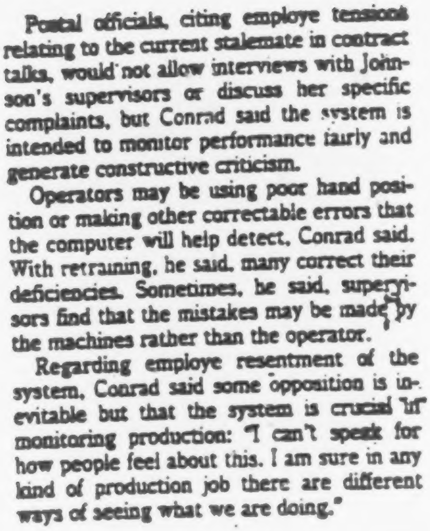
"The noise is incredible . . . . A [illegible] people wear their Walkman [radios]. You have hundreds of people, and tremendous noise, and tremendous heat. The air-conditioning breaks down quite often too," she said. "And it's like you are strapped into that machine. You gotta have your rhythm. Rhythm is everything. The average employe is a good keyer, but you can become hypnotized. Those machines can hypnotize you."

Adding to the tension, she said, is uncertainty about whether the supervisor is scrutinizing her work. The worker never knows, she said, whether the supervisor is watching, or just what he is watching. "Without getting up from his desk," she said, "he can see what you are keying in, whether you missed a character or only keyed in one digit instead of two. Or if you miss the hit altogether" as the envelopes whiz by.

"People are human and you have all different kinds of supervisors," good and bad, Johnson said. "But it's like overseers sometimes, watching and walking and walking and watching."

Carl H. Robinson, president of the 2,500-member D.C. Local of the American Postal Workers Union, said employe failure to keep up the required 95 percent accuracy rate results in about five dismissals per year, which are carried out only after attempts at remedial training. But sometimes, he said, the Postal Service is heavy-handed in failing to consider the "human aspect" of why a worker has trouble: "They're only concerned with productivity."

The Postal Service, with its abundance of acronyms, calls its monitoring systems EDIT and EZR—the Engineered Data Isolation Technique and the Electronic Zip Retrofit—and uses them not only to monitor employes but also to monitor machines, said Postal Service spokesman George Conrad.



Postal officials, citing employe tensions relating to the current stalemate in contract talks, would not allow interviews with Johnson's supervisors or discuss her specific complaints, but Conrad said the system is intended to monitor performance fairly and generate constructive criticism.

Operators may be using poor hand position or making other correctable errors that the computer will help detect, Conrad said. With retraining, he said, many correct their deficiencies. Sometimes, he said, supervisors find that the mistakes may be made by the machines rather than the operator.

Regarding employe resentment of the system, Conrad said some opposition is inevitable but that the system is crucial in monitoring production: "I can't speak for how people feel about this. I am sure in any kind of production job there are different ways of seeing what we are doing."

American Postal Union officials we spoke with began by noting that postal employees have been visually monitored throughout the Post Office's history (see our pre-OA baseline), and that fighting against "catwalk peepers, microphones planted in rest rooms, cameras watching mail sorting, and now, electronic machine monitoring is part of the postal scene. Postal employees work under surveillance already, constantly."[52] At one level, the union has worked out a modus vivendi with the management that monitoring by machine is acceptable as long as the figures obtained are used for retraining, improving procedures, and balancing work loads, not for "reprimanding or controlling employees." The union looks at production quotas and work standards to see whether these reflect what an "average employee can do," not "some laboratory model under perfect conditions that an efficiency expert has dreamed up." The union has worked to get "fair" standards for all kinds of pre-VDT jobs and has taken those cases into arbitration; it views its role now with VDTs as a continuation of that process.

In one area, however, the APWU has tied injuries to postal workers to the work quotas set by the management. This involves some 5,000 postal employees using VDTs in a computerized mail forwarding system.[53]

The APWU has collected health-impact data from its members using the mail forwarding system (CMFS). It has also commissioned two health studies, one in Minneapolis and one in New Jersey. It alleges that 24 out of 46 workers using VDTs in this system at the Minneapolis unit "have had occupational diseases diagnosed either by their own doctor or by the Postal Service doctor in Minneapolis," and seven additional employees have had "hand, arm and wrist problems" and are awaiting medical evaluation. The primary problems are carpal tunnel disease, tendonitis, and epicondilitis.

The APWU believes that the problems are caused by a combination of improperly designed terminals for this task, poor ergonomic conditions, and the "dangerously high" work-quotas set for each operator. The crux of the problem seems to be that a CMFS operator must depress a key on the right-hand side of the keyboard to order a label printed with a change of address, for a postal patron whose mail is being re-directed. The placement of that key requires that the little finger of the right hand reach over a significant distance to accomplish that task, causing strain on the tendon. The APWU expert we talked with believes that a split space bar, to be used by the thumb, would solve a good bit of this problem. (Other issues involve the terminals being at the wrong height on standard desks, and similar problems.) What needs underlining about this issue is that the union is protesting against machine-paced work and "dangerously high" work quotas, not the record-keeping and "surveillance" aspect of VDT use. While the two issues are often joined -- machine pacing and machine monitoring -- it is important to note the different problems each raises, and to recognize that machine monitoring of fair work quotas and quality as well as quantity aspects changes the character of the situation significantly.

5. Examples of Cooperative Federal Labor-Management or Employee Relations in High-Production Settings

We can provide several examples of situations in which federal agencies have used work monitoring for VDT operators in ways that have drawn positive employee and/or union responses.

(a) Department of Justice Employee Data Service

The Employee Data Service of the Department of Justice handles payroll for 41,000 employees in the DOJ. About 48 employees work in this heavy production unit (80% female and 20% male), and "overwork" is the daily condition in the unit. "We would need 10-12 more people to catch up and keep up with our work load," the director of this unit feels.[54] The VDT operators key in documents, there is an edit program, and an error program that kicks out those mistakes for which programming can note the error. Periodically, other workers check for keystroke error. Pay is by the hour, and people stay until the work required for the day gets done, receiving time and a half for hours over eight per day.

Presently, employees working as "contract" persons have their production monitored and their errors calculated, and this is used in performance evaluation. This system will be extended soon to the full-time employees. Management has presented the work standards, error calculation system, and performance procedures to the local American Federation of Government Employees union representative. The union looks to see whether the standard is fair for average workers, and whether the discussion process with the employee is full, fair, and "realistic." Under the contract, the local union participates in setting the standard and the evaluation procedure; it can also represent the employee in any problems that arise in applying the system, at the performance evaluation time.

There has never been union opposition to work monitoring as such in this unit. As long as it is done openly and fairly, the use of monitoring has been satisfactory to the union, the employees, and management. The director emphasized that monitoring as they do it gives employees recognition for the accurate and high quality work they do, and allows for promotions and other recognition. "We wouldn't want a shop where people don't get recognition for the effort and skill they contribute," the unit's director told us.[55] Prior to the new director initiating this system (October, 1984), he felt "there was lots of fear by the employees, because they didn't know what was expected of them for satisfactory performance, and what they had to exceed to get promotions." "The system we put in has been a great relief to employees. Having specific figures of total group performance, plus each individual operator, was also helpful in discussing the standards with the union, as to what would be fair."

The concept of "fairness" at the DOG Employee Data Service has been seen as embracing several elements:

- It must take "the ups and downs of work into account."
- When work influx increases dramatically, and "keeping up" is critical, the accuracy standard has to be decreased.
- When the pressure gets too great on any individual operator, management will redistribute the load rather than expect "heroic" effort.

(b) The Internal Revenue Service

IRS has about 25,000 clerical employees working in its 10 service centers during tax return filing periods, about 9,000 of them using VDTs. They are of two types: data entry workers and telecommunication operators using a computer-based call controller, with display board. All these employees have individual performance data collected by machine (software-generated) statistics. (IRS has traditionally used production monitoring in its pre-VDT data-entry operations.)

Working with local union committees of the National Treasury Employees Union in six of the 10 local service centers, the IRS has developed a joint labor-management Incentive Pay Program that has work monitoring as one of its key elements. Local union-management committees can select either keystrokes or documents as their measure for productivity. The goal of the program is to attempt to return to the individual operator 50% of the savings realized by increased productivity and quality through the VDT/productivity program, as "incentive pay" beyond regular pay.[56]

Employees can opt to participate in the incentive pay program or not to do so. They can see their own printout at any time, in daily or weekly form. The union has access to all production statistics generated by the system.

The reporting on individual employees is done through a combination of machine generated statistics and employee reporting of production data and hours on a special form. Error rates reduce total keystroke or document production counts, so that employees must address accuracy as well as speed. The form contains five critical elements, set up for each specific type of VDT job. Three evaluation levels are used: "satisfactory," "unsatisfactory," and "superior."

Both union and management officials we interviewed say that employees like the system.[57] The local union committees are positive about the way that standards of quantity and accuracy are set, and the way that "substantial additional pay" is being achieved by participating employees. Management feels that the improvement of work rates and accuracy rates is "very satisfactory." However, the IRS has not tried to do strict pre and post-experimant productivity studies. They feel that recent changes in tax forms and rules make scientific comparisons impossible.

Summary of Federal Agency Practices

The Federal Executive Branch displays the full range of clerical VDT work monitoring policies and employee/union reactions that we found in the private sector. These range from heavy VDT operations that do not collect individual-operator statistics to continuous monitoring of individual operator output and its use for evaluating performance and making incentive payments. We also found that while federal unions are all opposed, in principle, to "machine pacing" and "machine monitoring," applications by management in which unions participate and that are considered "fair" as to work level and evaluation procedure have drawn positive reactions from local and national union officials. Federal employees individually also demonstrate the basic split among VDT workers between those who feel any monitoring is "unfair surveillance" and used to "control them" and those who feel that this provides an objective measure of their performance that -- in the hands of a fair management -- will recognize their achievements and win them better pay or upgrades that would otherwise depend on "personal" and "subjective" judgments of supervisors.

Work Monitoring in the Corporate World

A 1984 article in Dun's Business Month provides a useful series of vignettes showing how large firms are using individual monitoring of VDT service work. These profiles match those of similar companies that we visited which are using evaluative monitoring for VDT-intensive jobs:[58]

- "American Express uses them to monitor the data-entry personnel who record account payments and the operators who answer phone queries from credit card holders, among others. The company, which gets some 20 million phone calls a year, considers the speed of response part of the quality of its customer service, explains Senior Vice President Edward Sherin.

  The monitoring system measures the average time it takes to answer a call (the goal is ten seconds or two-to-three rings) and the time each representative spends with each caller. The system reports this data per operator, per unit and for the 500 people in the organization. To assess service quality, supervisors listen in and rate each operator once a day on the time the operator takes for the greeting, to get to the point, to give the answer, and courtesy.

According to Sherin, gains in productivity units (production in relation to staff) in the past two years show an overall rise of 5% a year. As a consequence, he boasts, 'We have added less staff in proportion to the gain in volume of business.'"

- "At the Third National Bank of Nashville, First Vice President Ronald Robinson, director of operations, started a productivity program in February 1981 for the 33 machine operators who encode the dollar amounts on checks to make them readable by computer. Using a software program to count the rows, or 'fields,' of numbers each machine operator encoded, Robinson increased productivity standards from the average 900 fields per hour then being realized to a minimum acceptable rate of 1,000 fields. Employees who failed to make the grade were retrained until they succeeded or were transferred within the bank.

Before monitoring started, Robinson paid encoders the minimum wage. Now he pays the minimum for 1,000 fields and a bonus of varying amounts for each 100 fields achieved above that. The result: Encoding production is up 55% to 1,400 fields an hour; the encoders are making more money; and the employee turnover rate has dropped from 70% to 20%. 'The program is fantastic,' Robinson says."

- "Another enthusiast is Scott Byer, vice president of group operations at Equitable Life Assurance Society, which has been using computers to monitor its processors of group health and disability claims since July 1982. Because all claims are not equal in difficulty or length, the computer must analyze the characteristics of each claim an approver processes each day and then assign the claim a unit of productivity depending on complexity.

  Equitable evaluates each approver every six months and grants salary increases or assesses decreases depending on performance. Substantial productivity gains resulting from the program, Byer reports, have allowed the company to cut its claims processing staff from 3,000 to 2,000-to-2,500. 'We are paying 20% more claims with 25%-to-30% fewer people,' he says."

- "Similar improvements are reported for a computer program that monitors classified advertising sales employees at The New York Times to distinguish between the time they spend writing and processing ad copy and the time spent in selling. By linking incentive bonuses to improved employee efficiency, the company says it has raised employee earnings, improved customer service and increased classified advertising revenues."

One important point shown by our site visits and interviews is that many small and medium sized businesses, not just large firms, are using computer monitoring for VDT-intensive clerical jobs.

- At one small mail-order jewelry firm in a metropolitan area that sells low-cost diamond rings, five operators verify customer orders, trace invoices, enter refund amounts, and perform similar operations at their VDT keyboards, accessing a customer data base. Their work is monitored by computer printouts and also by surveillance cameras used by this firm both for security purposes and to watch employee performance. A former employee we interviewed recalled that "they used the cameras to watch how hard you seemed to be working, when you got up to stretch or take a break, and your 'attitude' at work. It was really a totally monitored place." This woman was not granted the standard raise after six months of "probationary" work at minimum wage -- even though this was recommended by her supervisor -- because the management said she "didn't look like she was working that hard" when they observed her on the camera. She had no access to her own production figures or to those of other employees with which to challenge that judgment, nor were there stated production standards she could rely on even if she had any complaint procedure. She quit, as did many of the women working in this small shop after their first six months. The management saw such heavy turnover as quite all right, since they had a steady supply of trained VDT operators willing to take "probationary" pay, and the firm did not need operators knowledgeable about the business to do the data entry work involved.

Most of our site visits, however, were done at large sized business firms. Looking at these organizations, the picture is slightly different than the overall pattern of monitoring we described earlier, for all the organizations we visited. Reflecting the early entry of large business firms into office automation, and their use of work measurement practices in pre-OA office-production jobs, the pattern of VDT monitoring among the business firms we visited was as follows:

- Virtually all business firms are collecting operator statistics on some clerical operations in their organization. Depending on the business, this may involve a large number of clericals or only a few small units, such as a "data entry shop."

- A small minority of firms, perhaps 10%, said they used machine monitoring only for group evaluation, planning, and cost-justification analyses. These firms stressed that supervisors were able to judge individual operators well enough in their operations without needing performance printouts, and that concerns over the quality of work and the unevenness of customer or transaction demands did not make measurements of transactions useful in those enterprises.
- In the remaining business firms, about 90%, individual operator monitoring was used in some way for employee evaluations. Our judgment is that two-thirds of these business firms were using monitoring in what could be called "traditional productivity modes," and about a third had developed what we will call "fair measurement" approaches that stressed privacy-related and employee-involvement mechanisms.

We turn now to describe examples of the assumptions and practices of the business firms using monitoring for employee evaluations.

VDT Monitoring in "Traditional-Productivity Modes"

At about two-thirds of the business firms we visited, what could be called "traditional-productivity modes" were being applied to clerical VDT work, especially to data entry, customer service, and claims processing jobs. Critics call these "Taylor factory models" or "scientific-management control" techniques being transferred to the new technological settings of office work. Business spokespersons defend these as thoroughly fair methods geared to insure efficient operations, well within the capabilities of average workers.

We noted two main variations in the use of such traditional-productivity modes of VDT monitoring. In some, managements felt that quantity of output and speed was so critical to the successful operation of their enterprises that they made this the dominant element in their performance standards, with the VDT-generated records of quantity, speed, and time-working used as the critical elements of evaluation. While almost all such firms stressed that they were also concerned about achieving low error rates in data entry work, for example, or meeting special customer concerns on telephone contacts, their systems made quantitative measures the driving force of their monitoring programs.

How employees we interviewed felt about such systems, in both unionized and non-union settings, depended on factors such as how well quantity/speed standards reflected the reality of VDT jobs and working conditions; how well system problems in new or changing OA applications were recognized; and whether supervisors applying standards were seen as fair or punitive.

These factors were well illustrated by the experience of a large, non-union distributing company we visited which introduced a VDT customer-ordering system in the 1970s. The business involved was one in which total volume of units sold in the nation was steadily declining, discount sales threatened traditional profit margins, and the basic profitability of the enterprise was threatened. This firm turned to new technology as one important way to meet the challenge, and also adopted techniques of detailed productivity measurement that had not been used in this firm previously.

> A special work productivity unit was created which did time-method-and-motion studies, set strict quotas, and generated detailed records on each VDT operator. Employee morale dropped and turnover rose to 80%. "Everything was numbers," one executive recalled, with "no attention to the downtime and slow-response-time problems of the new system, or the changes in volumes operators faced during peak periods, or of the different length and complexity of customer orders." In addition, improperly filled orders increased under the pressure operators felt to raise their total of orders completed per day. The productivity system was scrapped after several years of operation. A new approach was instituted that still collects individual operator statistics but has standards geared to actual system operations and load cycles. In addition, as part of an overall "Quality First" campaign in this firm, the new performance standards stress "order quality" over "sheer numbers." Several dozen long-term employees we interviewed said that the first productivity system was a "very bad time" at the company, but that the new approach is "fair to both company and employees," and they have no trouble in meeting both the quantity and quality standards.

At a medium-sized suburban newspaper, customer-service employees felt that the record-keeping done by the VDT system in the circulation and classified-ad departments had been fairly applied from the earliest days of these systems.

- Alice, employed three years at this newspaper, had worked previously doing non-VDT order entry at a manufacturing company. She said she liked working on the VDT very much. She cited the ability to see what you are entering "come right up on the screen," to be able to call up data base information to help the customer, and to spot troubles for the customer and "fix them right away." The management has a daily job chart that records each operator's time on and off the machine, errors made, and accounts handled. "I don't mind that at all," Alice said. "They don't judge us on the numbers here; they take into account changes in the business service we are making, and the way customers -- some of them -- need more service than others. It's not a Big Brother thing." She explained that sometimes customers call to complain but not to start or stop a subscription, and if the employer was only after "subs numbers," they would be "docked for time that did not produce an actual transaction. This isn't done. As a result, Alice said "I don't feel they're looking over my shoulder wrongly. I'm comfortable with the supervision here." She also noted that management's attitude led employees to cooperate informally to take heavy loads off one another when the calls piled up at one or two stations. "We can do that because we know it doesn't penalize anyone to share work this way." Alice also said that pay was "OK" but not "great" at this newspaper, but she liked the job very much because "the benefits are excellent, you can take courses at night and have the company pay for it, and people you work with are fun to be with."

How important the balance between quantity and quality was in a traditionally-oriented system was shown at a large public utility, with union representation.

- At this firm, counts are made of the customer-service calls that operators handle. However, the count is weighted so that operators working on larger amounts due and more complex payment plans receive more credit than simpler calls that can be handled faster. "Our whole approach," the manager of this unit explained, "is focused on quality," and our strong instincts about who is working well, which "we trust more than machine statistics." The manager explained that "some productivity programs look wonderful on paper, but they won't work in real job environments. If they aren't fair, and fine-tuned to the job being done, they can easily be defeated by the employee. They can always find ways to make the figures look better for them, and defeat the whole purpose of a productivity drive. We aren't a factory here, with production line quotas. In an office, doing customer service work, its people you are dealing with, and relations with people count the most. It's quality of

> service we go for here, not call counts and line counts. And the employees know that, and appreciate it." Our employee interviews found high satisfaction with the evaluation system at this firm, and the local union said it "had no problems" with work evaluation procedures.

Another example of general employee satisfaction with a traditional productivity measurement approach was at a large non-union financial company, using a VDT-telecommunication system in collection work. This firm had gone from a system that had used telephones plus manual records to a system that had a dial telephone plus a VDT database, and, most recently, to a system that combines an automated telephone call-up of customers with a screen display of that customer's account. Through all three of these successive systems, the company had collected detailed transaction records on individual collection operators, using these to give individual and group "recognition awards" for excellence, evaluate each operator for annual salary-level increases, and help decide on promotions to lead operator or supervisor. In this firm, quantity of output was used as one measure of performance in an eleven-factor evaluation system. (The form used, with the factors listed, is reproduced on the next page, as Figure 2.)

We interviewed several dozen employees at this firm. They were overwhelmingly satisfied with the way individual output was measured, and the balanced quantity/quality/attitude/attendance oriented employee evaluation system that was being used. In fact, employees who were good at collections work said they would be very unhappy at any system that used only "group performance" and did not record how well they were doing individually. These employees felt they were excellent performers, and they wanted the high salary-grade increases each year and other recognition that went along with their achievement. As one woman put it, "We wouldn't want to be dependent only on the subjective judgments of a supervisor, who might be someone you didn't get along with so well."

Figure 2: Mixed-Factor Performance Evaluation System for VDT Customer Service Operators, Large Non-Union Firm

EMPLOYEE EVALUATION WORKSHEET

MONTH/YEAR____________________

NAME____________________

EVALUATION RATING____________________

CRITERIA		
1. QUALITY OF WORK PRODUCED		
2. VOLUME OF WORK PRODUCED		
3. COMMUNICATES EFFECTIVELY WITH EMPLOYEES, SUPERVISORS, CUSTOMERS, ETC.		
4. WORKING WITHOUT CLOSE SUPERVISION		
5. KNOWLEDGE, UNDERSTANDING & TECHNICAL USE OF ROUTINES & PROCEDURES		
6. CONCLUDES ASSIGNED DUTIES IN A TIMELY MANNER		
7. MEETS CHANGING DEMANDS OF THE WORK SITUATION		
8. WORKING WITH OTHERS		
9. WORK HABITS		
10. ADHERENCE TO WORK SCHEDULE		
11. ATTENDANCE DAYS OUT...........		

EMPLOYEE SIGNATURE____________________ DATE__________ MANAGER'S SIGNATURE____________________ DATE___

Two examples of disputes over the application of traditional productivity models to VDT clerical work will illustrate the controversies that have arisen over these methods. The first involves telephone company customer-service work.

Monitoring by the Bell System of directory assistance and long-distance telephone operators which we discussed in the pre-OTA and transition eras, carried over into VDT jobs in the 1980s. Many telephone operators we interviewed bristled with anger at the production standards and work monitoring practices used by AT&T in the AWT (Average Work Time) system. Operators noted that the system puts in each operator's personal ID; the date each day; and how many times they plug into or out of their position; how many hours and minutes are worked each day; how many "position calls" are handled per second, per minute, per day; the total work volume, and then a AWT percentage figure. Operators are expected to handle a call in 30 seconds or less, and to achieve a 96.0 or better AWT percentage. If an operator did not have 96.0 or higher for three consecutive months, she or he would not be granted an upgrade, could be identified as needing "training," or could be disciplined by the supervisor. One telephone operator described the problem she saw with the AWT administration as follows:[59]

> Management would like everyone to exceed this figure of 96.0, so in return some operators try very hard in many ways to exceed it. The problem with this is that some of the customers we are helping are getting very poor service, and in some cases, no service.
>
> If the company would really look at AWT's honestly, they would realize that by having this type of measurement they are causing the operator to give poor service and in return are losing the respect of our customers.
>
> We no longer are considered as caring and helpful operators. We get many complaints that the operator did not stay with the customer's call and follow through.

> Why AWT's? Many of our customers are very dissatisfied with our service, and are going to other telephone companies. We are losing a lot of revenue, plus the stigma of being a rude and unhelpful company.
>
> That is what AWT's have done for our company -- What price is the right price in the name of progress?

These concerns expressed about telephone-company-management reliance on the AWT system are not hypothetical ones. In 1983, for example, a veteran telephone operator in Baltimore working for the Chesapeake and Ohio Telephone Company was fired for taking "too much time" with callers. The company said that Maevon Garrett averaged three seconds longer than the company's AWT productivity standard of 30 seconds per call. Garrett -- who was also a union officer and spent a limited time per month on operator duties -- said her exceeding the average was because she refused to cut short calls from "people who are hard of hearing or who have difficulty with the English language." The Communication Workers won her reinstatement after newspapers and television publicized her case, but she was still given a two-week suspension for spending "excessive time" with customers.[60]

AT&T's position, as given to us by company officials, is that it sets AWT standards only as a guideline to show employees what is needed for the company to provide service at a price that will meet its growing competition for telephone service. Monitoring of quantity by software in the VDT system and sampling of conversations by supervisors is not used for disciplinary or "punitive" purposes, company officials say, but to identify operators whose "consistent" record of taking longer on calls requires supervisors to see what explains that fact, and to provide better training or coaching so that the employee achieves the standard as an average, over thousands of calls. AT&T officials say that if some local supervisors have used the AWT standard for disciplinary purposes, that violates company policies, and is not something that would be continued if it is exposed, though they acknowledge that "a few over-zealous supervisors" may have done this in the past. Company officials also believe that, in the past, the Communication Workers union has made the "monitoring issue" a highly emotional one at its conventions and in public statements, to suit union purposes, rather than working cooperatively with the management to deal with any excesses or misuses that may have occurred.

(For a discussion of some current efforts at cooperation between the CWA and Bell Operating Companies, see the later section on innovative approaches to work monitoring.)

The second example of controversy over traditional productivity models applied to VDT clerical work involves the claims processing office of Equitable Life Assurance Society in Syracuse, New York, which was successfully organized in 1982 by an affiliate of the Service Employees International Union.

In 1979-80, Equitable began implementing a company-wide automated claims system for health insurance. Previously, claims-approving was a "semi-skilled" job that was done manually, using data sheets, with various filing activities and telephone work included in the daily routine. With automation, claims approving became essentially a data-entry job; clerks spend almost all their nine and a quarter hours a day, four days a week, keyboarding claims data into the data base, via video display terminal. Most of the approval-rejection functions are built into the system software. In its 1982 Annual Report, Equitable describes its "Equi-Claims System" as "the most sophisticated computerized system in the industry..."

At Equitable's Syracuse office, many of the 90 women claims approvers did not regard this changeover as one for the better. Jane Ratner, a former school teacher who had worked under the manual system, said she had never expected to be doing such work as an office employee. "I'm a factory worker, that's the way I feel. The way our office is set up, it's a whole line of computers. We're all lined up. We all face the same direction. And all we do is punch keys all day long."

In late 1980 and early 1981, some of the Syracuse claims processors said they tried to get management to look at problems arising from the way the company was applying automation. As one employee recalled this: "We raised questions about the work procedures, about glare and eyestrain, about 'dirty curtains' and annoying 'paper fleas,' and about the ergonomic and health issues being presented on national television and in the press. We wanted to work with the management to make things run better."

In the employees' view, the Syracuse Equitable management was not responsive to any of these concerns. Some issues they felt management simply rejected; others they said were explained as "management decisions" that just had to be accepted; some things "they promised to look into but nothing was ever done." On the health questions, the supervisor approached said: "There's nothing to that. Don't start making trouble in the office." According to the employees, Equitable did not have any Quality Circles or other employee-involvement programs for these workers, where such issues could be raised. Several employees remarked that they felt they knew more about problems and bad effects from the new computer system than the management did; "but management basically told us, shut up and key-in your data."

Machine monitoring of the claims approvers was a central issue in the union organizing campaign, in the contract negotiations that followed, and in the contract terms approved in 1984. In testimony before a House Subcommittee in 1984,[61] one woman clerical worker in Syracuse, Rebecca Alford, discussed monitoring in these words:

> The electronic monitoring is one of the most offensive and pernicious aspects of our jobs. 1984 is nowhere more apparent than in the electronically-monitored Equitable office. We 'clock in' at 7 A.M. and from then until the end of the day, the VDT is counting every keystroke. At the end of the day, managers have a computer read-out from which productivity is determined and then averaged with subjective factors such as attitude to determine our rate of pay. Being watched, counted, and paced by a machine makes it very difficult to take pride in your work.

The Syracuse Equitable workers charged that printouts of their performance are given to supervisors, who use them to calculate pay. The employees also charged that the performance evaluation system included "subjective" factors such as "attitude" which management could use to discriminate against employees who complained about VDT working conditions or were leading the union campaign. Employees did not get to see the printouts, the employees charged, and were not able to challenge how their work is assessed. This was alleged to be a violation of Equitable's own "Employee Privacy" code, which says that employees can see the information used to make personnel judgments about them.

Equitable management defended its monitoring practices, saying most of its claims approvers across the country "like the objectivitiy" of the computer monitoring system, and do not experience a sense of "stress" as a result of its use. Company officials also defended the multi-factor performance evaluation system it used as a good balancing of quantity, quality, attitude, and attendance elements, denying that it had been used in a discriminatory way.[62]

(For a discussion of how monitoring was treated in the 1984 Equitable-SEIU contract, see the following section on labor relations actions involving monitoring.)

Finally, some managements using incentive pay systems based on work monitoring, especially in routine "heads-down" data entry jobs, defend this as "the only thing that makes this job worth while for women doing it." At a small data entry unit in a large insurance company, the unit manager said that the women who work there soon develop a high proficiency in putting the data in, and take home "very good pay -- much more than they could get working in a five and dime or a fast-food place. They can pace their effort according to how much 'extra' they need for themselves or their families, and know that they can raise their pay by putting extra effort in or just 'make standard' with average effort." Data entry employees at several firms we visited told us that this was an element that they liked to be able to decide for themselves, and they believed the company's system of standard and incentive pay was a good one for them.

"Fair Work Monitoring" Approaches

At about a third of the business firms using evaluative work monitoring, managements had developed policies for conducting work monitoring that recognized the special sensitivity of this practice, in light of social values of the 1980s, and had instructed their operating divisions and line supervisors in how to use any individual records in clerical work generated by VDT software. At IBM, for example, a Manager's Guide to The Visual Display Terminal Environment was issued in 1984 that set out rules for how VDT work was -- and was not -- to be evaluated. This Guide serves as one part of a manager's training course on VDT work that each of IBM's 50,000 managers, world wide, will be going through in 1984-85. The Guide places its discussion of monitoring in the context of IBM's overall philosophy and practices for planning and evaluating employee performance (See Figure 3).

Figure 3: IBM's Work Evaluation Approach in Using VDTs

Setting Objectives, Performance Planning, and Evaluation

One important reality of introducing VDT's is that they do change how the work is done and what is expected of employees. In some instances, due to the increased capabilities VDT's provide, a function's mission may actually be enlarged and the jobs of the people in it expanded. In other cases, VDT's may require the creation of an entirely new function. When this occurs, you must redefine the function's objectives and the responsibilities of the people within it.

Setting Objectives

Starting with the function, you should clearly define the overall objectives for the total organization and each department within it. Next, identify the type of information you will need to measure how well your function is meeting the stated objectives. Finally, decide what relevant data the VDT system can provide to help you measure your function's performance.

Performance Planning

Once the objectives are agreed upon, they must be related to all the individual jobs within the function. You should conduct a meeting with the entire function to explain your objectives and how the installation of VDT's will make it possible to achieve them. You should then plan for all managers within the function to conduct performance planning sessions with their employees. This will give each person a chance to understand the impact of VDT's on his or her own job.

During the individual performance planning sessions, each manager should discuss:

▶ What tasks or responsibilities are being changed;

▶ What new tasks or responsibilities (if any) are being added;

▶ What is expected in the job, specifically as it relates to the work done using the VDT; and

▶ What will be evaluated and how it will be measured.

Through this, you and your managers will have the opportunity to tailor the job to the employee, based on his or her stage of development. Since performance planning is a two-way process, each manager should be able to plan an assignment that meets the individual needs of the employee, provides the greatest level of job satisfaction, and achieves the objectives of the function.

Evaluation

The method of evaluating the performance of an employee who uses a VDT is very important since it may be possible to track a great deal of data using the system. It is essential that you evaluate your employees on the measurements you discuss with them during the performance planning process.

If some of the employee's performance will be measured using data from the VDT, be sure you explain exactly what will be tracked and why. Employees should not be measured on a purely quantitative basis, such as numbers of keystrokes. You should not monitor performance data on the VDT without an employee's knowledge. The data should be meaningful and relevant to the work being done. You should never include data in your evaluation that was not previously discussed with the employee.

We found "fair work evaluation" policies such as IBM's being used by other organizations we visited that have a reputation for innovative employee relations. These included banks, insurance companies, utilities, newspapers, hotels, airlines, manufacturers, and service companies. (For an analysis of what fair work evaluation approaches require, see the "Policy Analysis" section of this report.)

Work Monitoring in State and Local Government and the Non-Profit Sector

In our site visits, discussions with union staffs, and other interviews, we documented examples of no-data-collection, traditional-productivity models, and fair work evaluation approaches taking place in clerical operations of state and local government agencies and non-profit organizations quite similar to those we have documented for federal agencies and corporations. State and local government agencies seem to have about the same patterns as the federal government. However, in terms of organizational milieu and management style, there is generally less evaluative monitoring going on at private universities, religious bodies, civic groups, and similar non-profit organizations.

Monitoring of Professional and Management Personnel by VDT-Based Systems

Though we have concentrated our discussion on machine monitoring of clerical workers, we found that in some organizations, perhaps 10-15% of those we visited, productivity monitoring is being applied also in office systems developed for professional and management staffs. While these employees are usually better educated, better paid, and have higher social status than clericals, the effects of close monitoring done without appreciation of complex system performance and human reactions with it can raise problems similar to those in clerical work.

Here is a first-person account of how one loan officer and his colleagues at a major bank learned to hate — and to defeat — a productivity monitoring system imposed on their department.[63]

"An individual loan administrator manages a portfolio of approximately 75 mortgages.... The job of the loan administrator involves a fastidious attention to detail. The computer system, called our Management Information System, (MIS) is a useful device for tracking important details such as due dates; these may include tax due dates, insurance due dates, investment roll-over dates, and the like.

"Each employee is watched by the system, sort of like the realization of the Orwellian prediction. To be tracked on the system is to be monitored by it on a daily basis with regard to every conceivable item of work which could be performed on the job. The MIS does perform some essential functions in helping to manage the enormous work load, but often it was looked upon as an excuse for increasing the work load even more. Preparing the daily MIS input sheets at the end of the day is a dreaded duty, done hurriedly before leaving the office.

"The MIS theoretically tracks every thing which the loan administrator performs during the course of the day (otherwise referred to as "demand time.") The entire job of the loan administrator is dissected into every minute function which might be performed. Each function is assigned a certain time standard for how long it should take to be performed. After the MIS is posted, the system calculates each worker's daily productivity as a percentage figure based on what the employee reported as having done that day. It is this aspect of the system which makes those who are watched on it distrustful of management because it seems like a management surveillance system.

The loan officer than explained the computer's "aging scale" which tracks how many financial statements are outstanding for borrower accounts assigned to each loan officer, and how many days overdue they are. The standard for such overdue items is 60 days.

> "When something goes out of standard, the loan administrator is severely upbraided, penalized and punished. Anything which goes out of standard on an employee's MIS automatically throws the department's MIS out of standard. Middle management can become quite tyrannical in its enforcement of the MIS, making the system that much more unpopular with the employees.
>
> "To avoid having things go out of standard on the MIS the employee can just get around the system by taking the particular item out of the system and entering it the next day, thereby turning back the clock on the aging report."

Another way to beat the system, the loan officer explained, is to put false items on the Daily Activities Report that will earn the loan officer high points under the system's rating scale, and bring his daily average up to where it is supposed to be. Since it is not easy for supervisors to verify that these particular transactions were carried out, the loan officer noted, "they can be used to inflate one's utilization and productivity rate." As a result, the Activity Reports often do not document what the loan officers are really doing, but what they put in to upgrade their productivity.

Summing up his judgment on the bank's monitoring system, the officer comments:

> "The system's shortcomings lie in the manner in which it is imposed by management. The preoccupation with the MIS itself distracts the loan administrator's attention from doing his job. The amount of paperwork generated for and by the system reduces its effectiveness because it becomes a consuming activity in and of itself. The MIS is viewed as part of the bank's bureaucratic organization, and it is constantly a source of frustration and annoyance to those who use it.
>
> "The bank has spent significant sums of money on these types of systems and their development over the years. They consider this one to be literally the 'state of the art" in MIS applications, and they are very proud to show the system off. They would do well to bring the level of their management expertise up to the standards of their management information systems."

The possibility of newspaper reporters and other professionals being put under machine monitoring by employers has been raised by the Newspaper Guild. The editorial and cartoon below, from the March, 1984 Guild Reporter, describes this concern.

Editorial

VDTs and productivity

One of the many things that electronic data processing systems do very well is count. That includes those used at newspapers, magazines and wire services to write, edit, set/send news and advertising copy and compose it into pages.

Because the systems count so well they are equally adept at keeping track of the productivity of each person who sits in front of a VDT and enters through its keyboard the various kinds of data that the systems process.

In the departments and firms that have been established to enter data into the systems of establishments such as banks and insurance companies the machines report regularly on how well each operator is conforming to standards of productivity established for data entry workers. The reports might include the number of key strokes by an operator per minute or per hour; also, the proportion of entries that require correction; even the time the operator is present at the machine and the time he or she is gone from it—to the second—and more. In some places, particularly where the operators are not organized, rates of pay depend on meeting those productivity standards. Often a data entry operator's keeping her or his job depends on the same thing. The operators have little, if any, say in setting those standards.

Several years ago, when electronic entry systems began to be introduced into the parts of the publishing industry where Guild members work—particularly into advertising, circulation and editorial departments—TNG foresaw just such problems and added a provision to its Collective Bargaining Program to deal with them. The provision requires locals to "seek protection that employers not be permitted to establish standards of speed and accuracy in the use of new types of equipment, and that proficiency in the use of such new equipment not be the basis" for assignments.

Some thought the bargaining position unnecessary—crying "wolf," if you will. No one seriously would consider making proficiency at a VDT a criterion for inside or outside sales jobs, or for editing and reporting jobs. The very nature of the work, particularly of the latter, defies conventional measurement. Right?

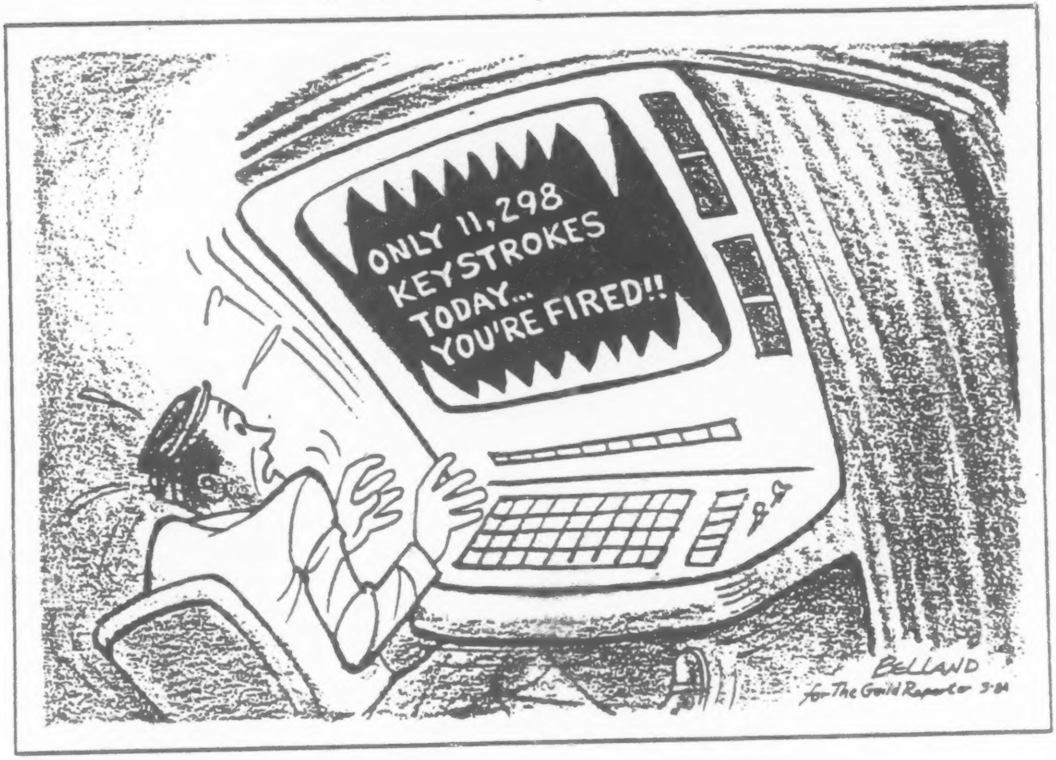
Consider, however, some of the reported comments of one panelist in a session on newsroom productivity at the California Newspaper Publishers Assn. convention early in February.

Max Jennings, executive editor of the Mesa (Ariz.) Tribune, a Cox-chain daily, actually touted using the computer to keep track of how much copy a reporter produces as a way to monitor and increase productivity, according to Publishers' Auxiliary, publication of the National Newspaper Assn.

Jennings told of a reporter who complained about another who was being paid more. The computer's tabulaltion showed that the higher-paid staffer was producing more. The complaining reporter also began producing more after seeing the data, Jennings said.

Sounds like piece-work to us, but then it is 1984.

The next 'new journalism'?


ONLY 11,298 KEYSTROKES TODAY... YOU'RE FIRED!!
BELLAND
for The Guild Reporter 3-81

Finally, we saw a few situations where monitoring systems were being applied to middle management, and where some were evoking the same negative reactions and manipulative responses as in the loan officer situation just cited. For example, in one company, headquarters announced it would institute a centralized monitoring system that would allow corporate staff to have on-line data about production, shipments, and so forth from each plant of shipping site on a constant basis. The plant manager that we interviewed was deeply angered by this plan, which he saw as a threat to good management. "Managers at my level should be accountable to corporate headquarters on a quarterly basis, not on an hour-by-hour monitoring of our time and decisions. It will just emphasize temporary negative events, and you'll be called on the carpet by top management whenever they look at the tube and see below-par figures." The plant manager felt that top management should let him manage without such "minute surveillance," which would only result in efforts to keep daily productivity up at the expense of much better productivity gains that could be achieved in a more up-and-down cycle.

This pinch of top management monitoring of middle managers was observed also by Dr. Craig Brod, in his recent book, *[illegible]nostress*. Brod writes:[64]

> "Middle managers also know that with computers they spend less time monitoring and more time being monitored. With computerization, quarterly reports become monthly or even weekly reports; if an unsound decision is made or an unlucky risk taken, there is less time to fix it before the next report points it out.

"Bureaucrats or supervisors who are not accustomed to being watched over feel nervous that their work is now subject to monitoring from above, or perhaps by peers. But while clerical workers have no say in whether management counts their keystrokes or times their phone calls, managers and executives may simply choose not to commit sensitive information to the computer....

"Jack is a manager for a computer manufacturing company. When he comes across a discrepancy in inventory, he writes it down on a sheet of paper; he doesn't use his terminal. He wants to avoid having the problem traced to him. Other managers at his company do the same, he says."

Union Positions and Protests on Work Monitoring

As we have documented in our pre-OA and transition-period profiles, opposition to setting "unfair standards, monitoring individual workers, and using those records for pay or discipline has been a traditional labor union position in the factory, and in those pre-OA office settings in which monitoring of production-type work or telephone service was conducted by employers. The additional aspects of intrusiveness and heightened stress that unions have associated with the continuous machine monitoring of VDT work has made this issue an important one for the labor movement as high technology enters office, service, and even some factory work (inventory VDT systems, for example). Their position has been shared by womens' activist groups and local union-affiliated committees on safety and health (COSH groups) in many states.

The International Federal of Clerical and Technical employees (FIET) included a call for "no VDT monitoring" in its 1984 bargaining guidelines for member white-collar unions.* The AFL-CIO at the national and some state levels has adopted a similar position. We collected statements opposing either VDT work monitoring in general or "improper use" of such monitoring by 20 U.S. unions, out of the 32 unions that have addressed VDT issues in the past few years. Several unions that had not issued official statements against work monitoring explained to us that they shared the general labor movement opposition to monitoring but did not have enough members involved in such activity for this to have been made an issue, especially given their more pressing concerns in the 1981-86 period.

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* Our Task 2 Report to OTA, Russell Pipe and Alan F. Westin, Employee Monitoring in Other Industrial Democracies, March, 1986, describes FIET positions on VDTs and monitoring in 1985-86 as well as ILO publications. These have been given wide circulation by U.S. unions in 1986.

Figure 4 lists the 32 unions active on VDT issues, and Figure 5 the 20 unions with anti-monitoring positions.

Figure 4: 32 UNIONS ACTIVE ON VDT ISSUES, 1986

UNIONS
* Automobile, Aerospace, and Agricultural Workers (UAW)
Communication Workers (ACA)
* Communication Workers (CWA)
Electrical, Radio & Machine Workers (UE)
Electrical Workers (IBEW)
Electronic, Electrical, Technical, Salaried and Machine Workers (IUE)
Federal Employees (NFFE)
Food and Commercial Workers (UFCW)
Government Employees (AFGE)
* Government Employees (NAGE)
Graphic Arts Employees (GAIU)
Hospital and Health Care Workers (HHCW)
Hotel and Restaurant Employees (HERE)
Ladies Garment Workers (ILGWU)
Machinists (IAM)
* Newspaper Guild (TNG)
Oil, Chemical, and Atomic Workers (OCAW)
* Office and Professional Employees (OPEU)
* Postal Workers (APWU)
Professional and Technical Engineers (IFPTE)
* Railway, Airlines, and Steamship Clerks (BRAC)
Retail, Wholesale and Department Store Employees (RWDSU)
* Service Employees (SEIU)
* State, County, and Municipal Employees (AFSCME)
Steelworkers (USWA)
Teamsters (IBT)
Telecommunication Workers (TIU)
Telegraph Workers (UTW)
* Treasury Employees (NTEU)
* Typographers (ITU)
University Employees (Clerical and Technical, affiliated with HERE)
Utility Workers (UWUA)

* Most active unions.

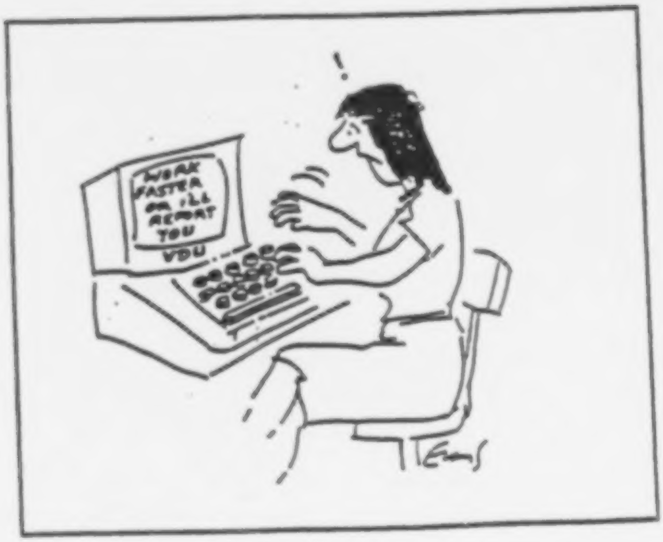
+ Totals rounded. Source of figures: Bureau of Labor Statistics, 1980; AFL-CIO estimates; supplementary inquiries at individual unions, 1984.

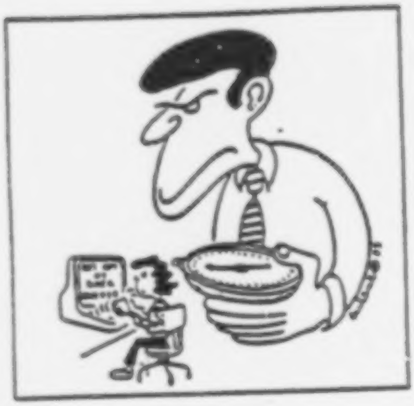
Figure 5: 20 UNIONS WITH POSITIONS AGAINST VDT WORK MONITORING

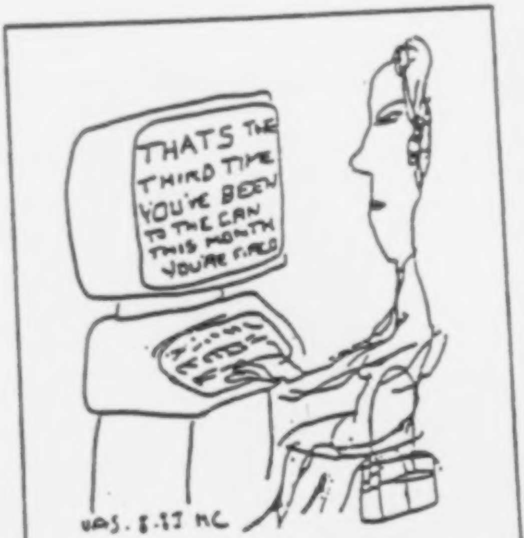
UNIONS	Estimated Members +
Automobile, Aerospace, and Agricultural Workers (UAW)	1,350,000
Communication Workers (CWA)	550,000
Electrical Workers (IBEW)	1,000,000
Electronic, Electrical, Technical, Salaried and Machine Workers (IUE)	160,000
Federal Employees (NFFE)	150,000
Government Employees (AFGE)	265,000
Government Employees (NAGE)	300,000
Machinists (IAM)	940,000
Newspaper Guild (TNG)	40,000
Office and Professional Employees (OPEU)	125,000
Postal Workers (APWU)	320,000
Railway, Airlines, and Steamship Clerks (BRAC)	200,000
Service Employees (SEIU)	650,000
State, County, and Municipal Employees (AFSCME)	1,100,000
Steelworkers (USWA)	1,230,000
Teamsters (IBT)	2,000,000
Telecommunication Workers (TIU)	50,000
Treasury Employees (NTEU)	120,000
Typographers (ITU)	80,000
Utility Workers (UWUA)	56,000

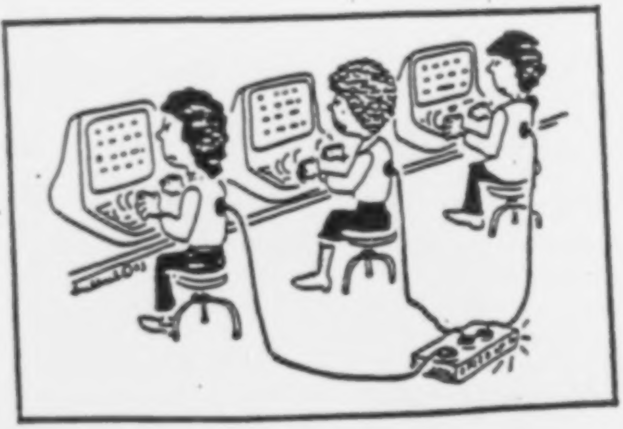
Totals rounded. Source of figures: Bureau of Labor Statistics, 1980; AFL-CIO estimates, supplementary inquiries at individual unions, 1984.

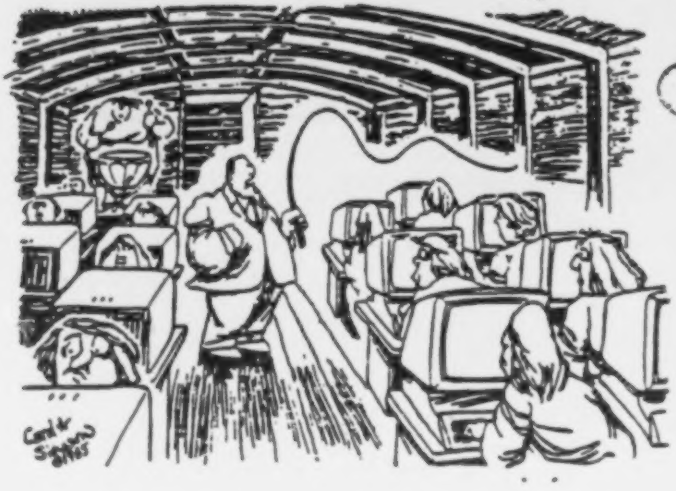
Recent cartoons in the union and activist press on work monitoring of VDT operators


!
WORK FASTER OR I'LL REPORT YOU
VDU
Evans



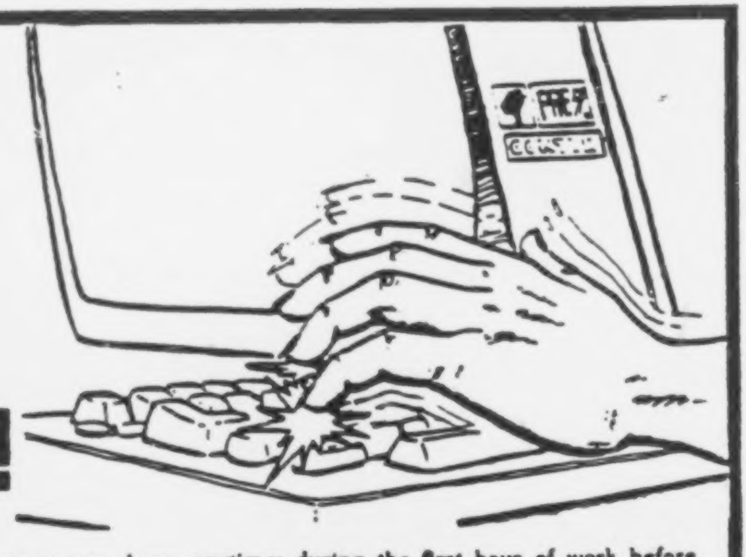

THATS THE THIRD TIME YOU'VE BEEN TO THE CAN THIS MONTH YOU'RE FIRED
WAS. 8.83 MC





"Keystroke! Keystroke! Keystroke!"

KEEP JANE'S FINGERS DANCING!



Secretary Jane's keystroke count can slump anytime: during the first hour of work before sleep's cobwebs have cleared, at 11:45 when thoughts of lunch intervene, or after 3:00 in that mid-afternoon doldrum.

Whenever it happens, PRESS® (Performance Reinforcement Electronics and Software System) is ready to help. If Jane's count drops below your chosen margin for more than three minutes, a subliminal warning flickers at the top of the screen. And if Jane still hasn't pulled herself together after two more minutes, a healthy 1-second jolt of 50 volts pulses out of her specially modified keyboard and grounds harmlessly through her chair. It's guaranteed to get her moving again! And if Jane "steps away from her desk" for more than three minutes without prior supervisor approval, PRESS® will dole out a similar jolt as a little corrective reminder when she sits down to work again.

PRESS® — The Automated *Zap* that gives your workers *ZIP!*
From CONTEK — The Productivity People

Louis Michaelson

A typical statement of the union view appeared in a series on VDTs in the Utility Workers newspaper in late 1983. The union reported that "operators feel that they are 'constantly watched' by the machine....VDT operations provide a much closer tracking system of their job performance than traditional 'paper punching' systems."

Many of the unions active on VDT issues have adopted resolutions or articulated demands involving work monitoring. At its 1982 Skilled Trades Conference, the UAW's resolutions on new technology included this statement: "Technology must not involve undue stress on workers either mentally or physically, and must not be introduced for purposes of computer-time study, monitoring, discipline, or job-pacing. The union must have full access to all information created by computerized data."

In its VDT Guidelines for Federal Employees, the National Association of Government Employees expresses a similar theme: "Stress-inducing features of automated jobs such as machine pacing or computer monitoring should be eliminated."

AFSCME has emphasized in its materials that productivity gains come when employees are able to work more effectively through new technology, not by trying to make employees work harder under tight monitoring:

> **Making Employees Work Harder.** Sometimes new technology cuts costs by making employees bear some of the true costs of providing the goods and services. New machinery may speed up the pace of work, or enable management to monitor work and measure output more closely. As a result, employees work harder under the new system than under the old. They bear the costs of additional stress and fatigue and possibly physical risk but do not receive compensation for the increased intensity of their work. One example of this cost-shifting can be found in some applications of visual display

> terminals (VDTs). Data entry work can be reorganized so that the pace and duration of the operator's time on the machine are increased, and the VDT can be used to closely monitor what work is done. This may lead to increased stress, fatigue, headaches, muscle aches, and eye strain. Ideally, new technology should improve productivity by making the employees involved work more effectively, not harder.

Collective Bargaining Positions and Outcomes

No union contract we are aware of includes a prohibition on employer use of machine monitoring. The Communication Workers and Telecommunication Workers, which have made "undue stress" through monitoring a regular bargaining issue in recent years, have only won provisions saying that the company will use service monitoring for training purposes and not for discipline. Union officials we interviewed felt that local supervisors and managers in some locations target older employees and union activists for close monitoring to build up cases against them, then use this either to block upgrade transfers or attempt disciplinary action. The Baltimore case we described earlier illustrates this kind of action, according to the union.

The contract won by the Service Employees from Equitable Life Assurance, for its Syracuse, New York claims approvers, represents, according to union officials, the most important "break-through" thus far in contract provisions on many clerical VDT issues, including work monitoring.[65] The key provisions of this contract which address the privacy aspects of monitoring include:

- Employees will receive full access to information on the productivity system and its operations, including how work units are counted, the weighting formula for time and erros, and how individual pay is calculated.
- Employees will have access to their own individual records, including the raw data sheets.
- If employees believe there is an error in their records, or their pay has been miscalculated, they can file a grievance and this can go all the way up to arbitration, if not settled by the parties.

While management's multi-factor employee evaluation program continues, which includes quantity, quality, attendance, attitude, and communication, attendance will no longer be used as a basis for penalty points and pay. In addition, annual wage increases will be paid, apart from the evaluation program.

Many union publications in late 1984 featured accounts of the Equitable contract provisions on monitoring and said this would become a "union standard." For example, an article in the Allied Industrial Worker in December, 1984 wrote:[66]

> A problem with such monitoring is that it can be done without the worker being aware that he or she is being checked. This raises serious questions about the dignity of workers, their efficiency and their health. While thus far most computer monitoring involves industries such as airlines, banking, insurance and telecommunications, it is likely that such monitoring will develop in many industries as the use of computers becomes more widespread.
>
> The best method for unions to use to attack in this area is contract language. The best example of such language is contained in the new contract between the Service Employees and Equitable Life Assurance Company.

Quality of Work Life and Joint-Committee Efforts

In some unions, joint labor-management committees or quality of work life groups have dealt with VDT issues, including ergonomics, stress, health and safety questions, and work monitoring. We discussed in our section on Federal agency practices the incentive pay project of the IRS and National Treasury Employee Union, in which work standards and measurement techniques were worked out in collaboration for this program.

The Communication Workers have described another such example involving Mountain Bell Telephone Company, one that is especially interesting given the long history of telephone company monitoring and of union opposition to how this is maintained.[67]

In Phoenix, Arizona, Mountain Bell and the CWA developed an experimental office where 130 operators handle long distance calls and billings for hotels in the entire Mountain Bell service area. Instead of using Average Work Time standards and traditional Bell-System monitoring of machines and telephone calls, the operators in this office set their own performance standards and supervise their own compliance with them. These standards reflect a quality commitment to assist callers needing special attention as well as efficient handling of peak loads, total productivity goals, etc. CWA President Glenn Watts reports that "these operators are working at higher than average performance levels, completely without supervision." After a year of operation, Watts reports that "the company has measured that unit's profitability at an incredible 45 percent" increase. This proves, Watts says, that "AWT just isn't needed to provide efficient and economical telephone service," and he has called on other telephone companies to follow the Mountain Bell example at other sites. He adds that AT&T's television ads "lately have emphasized the importance of its telephone operators and other workers in providing good service, but we still find in too many areas the company pressuring our people to get rid of callers in order to meet an arbitrary standard of so many seconds per call." Watts hopes to persuade other telephone systems around the country to try the Phoenix experiment, (Two detailed articles on this experiment appear in the Appendix, Item #2.)

Stress Studies and Filing Worker Compensation Claims

Unions, women's activist groups, and COSH groups have conducted surveys among union members of complaints about VDT working conditions and their health effects. This has been done by the CWA, Postal Workers, AFSCME, 9 to 5, and many others. The following report in late 1985 of health complaints among 900 Southern New England Telephone employees, for a survey conducted by the Connecticut Committee on Safety and Health (ConnectiCOSH) for the Connecticut Union of Telephone Workers, indicates the type of sell-reports of monitoring-stress linkages that unions and COSH groups have presented.

SURVEY OF VDT USERS UNVEILS POSSIBLE LINK BETWEEN HEALTH PROBLEMS, MONITORING

Preliminary results of a survey by some 900 Southern New England Telephone (SNET) employees, most of whom regularly use video display terminals, reveals a high correlation between reports of health complaints and reports of electronic monitoring through the equipment on which those employees work.

The survey, which was conducted by the Connecticut Union of Telephone Workers (CUTW), found that about three-quarters of VDT users who reported problems of dizziness, headaches, and muscle aches also reported that their work was monitored.

"There seems to be a correlation between health concerns and monitoring," reported Rick Melita, administrative assistant to the union president. He noted that the health complaints were reported despite the fact that, in most instances, workers were provided with "ergonomically correct" terminals and related office equipment, such as detachable keyboards and adjustable chairs.

The survey was conducted in March 1985. Questionnaires were mailed to 6,400 CUTW members employed by SNET in job classifications involving VDT work. The union received 926 completed questionnaires, for a response rate of 14.5 percent. Melita noted that, while the questionnaires were sent to those in job titles that involved VDT use, the union had no way of knowing whether specific individuals receiving the survey actually used VDTs. Among those responding, nearly 70 percent said they worked 30 or more hours a week on terminals, Melita said. Just over half said they performed other tasks besides VDT work, he said.

Monitoring and Health Complaints

The survey results showed that 67.5 percent of the respondents had their work monitored. Of that group, 50.3 percent said that the monitoring was used for disciplinary purposes.

Of those who completed the survey, 90 percent had "some sort of complaint," Melita said. "This shows that it is not just the occasional crank or malcontent who has complaints," he said.

A feeling of tenseness was the most frequent complaint (66.5 percent), followed by headaches (64 percent); difficulty focusing eyes (61 percent); muscle aches (60.5 percent); general vision problems (49 percent); and dizziness (21 percent), the survey results show. Just over 14 percent said they had high blood pressure, and 18.6 percent reported stomach problems, Melita said.

Among those who responded affirmatively to these nine health complaints, in each category more than 70 percent also reported that their work was monitored, a tabulation of the data showed. The data revealed, for example, that 76.9 percent of those reporting dizziness were monitored, while 74.1 percent with muscle aches and 74.8 percent with feelings of tenseness were monitored.

While only 3 percent of the respondents reported problems with pregnancies, of those citing this problem, 75 percent said they were monitored, Melita said.

High blood pressure and stomach problems — both of which were reported less often than other health complaints — had a better-than-70-percent correlation with monitoring, the data revealed.

Source: Employee Relations Weekly, 12-2-85, Bureau of National Affairs, p. 1478.

We have obtained and reproduce in the Appendix, as Item 3, the full survey and CTU report of the results.

In addition, unions have initiated campaigns in 1985-86 to document that injuries and disabling conditions experienced by VDT operators, and for which worker compensation claims have been filed, had their origins in a combination of bad job design, poor ergonomics, oppressive work monitoring, and supervisor threats based on such monitoring. While there have been well publicized awards of worker compensation to some VDT operators, we are not aware of any statement by a Board or an appeal that has dealt specifically with the monitoring aspect of such worker claim. However, unions and allied groups are clearly focusing on office-worker stress as a major thrust in worker compensation activity, and monitoring will be a key feature of the case against stress-based injuries.

Grievances and Arbitration

We have already noted that under federal law and labor relations doctrines covering other employment sectors, the right to measure work is a management prerogative, and has been so held in arbitration. Grievances involving VDT monitoring are therefore focused on particular management use of VDT monitoring. For example, in a recent case involving classified ad takers at the New York *Times*, the local Newspaper Guild chapter argued that management's introduction of a new telecommunication-VDT system that produced a log of time in and out and transactions completed was a "1984 system" that could not be introduced unilaterally. The union argued that this changed the terms and conditions of work in a manner that called for advance consultation with the union, and its agreement, and the union filed an unfair labor charge. A highly emotional walkout occurred, in which ad-takers complained that the system would record "when people went to the toilet," and was a "Big Brother" speed-up and surveillance system that ill-behooved "a great newspaper that is also a champion of freedom of the press and individual liberties." Badges saying "1984 - 6th Floor" appeared in the midst of the protest.[68]

The management answered that the system was a good one whose improved color graphics, better credit data base, and screen "prompts" would help ad-takers improve their productivity and increase their pay; it was never intended to nor would it be used to discipline people for breaks, including toilet breaks. In retrospect, management at the Times conceded that they had not done a good job of preparing ad takers for introduction of the new system, and that they had been unprepared for the violent reaction of the employees. The new system seems to be well accepted now, is producing improved pay for the employees, and has not been used for punitive actions.

Another grievance that went to arbitration in 1984 is the first instance we know of in which computer monitoring itself became the center of a grievance proceeding.[69] The Employment Division of Oregon State's Human Services Department began experiencing in 1982-83 a mysterious loss of documents from its Wang word processing system. When Wang technicians could find no defects in hardware or software, management concluded that one or more word processing operators was changing records to increase her production statistics, presumably to earn more pay or better evaluations.

The Wang system had a software package called the "Machine Statistics System" (MSS). This creates a record with the ID of the operator; the date; the document ID being worked on; the time work started and stopped on that document; what kind of activity was being done; the number of pages created, and the number of keystrokes used for each document. We reproduced a sample page from this Wang system earlier in this report, on page 27. This was used by the agency to collect monthly statistics on the group work unit and each individual operator.

However, they had not used it to check on which operator was using a particular terminal. The agency then wrote a more detailed software program to identify which operator was at a particular terminals. Using this system, management found that all the disappearing documents were originating at one terminal, used by an employee named Donna Stroup. They then monitored all activity at her terminal for a two week period, concluded that she was increasing her keystroke count while she also deleted documents worked on by other employees, thereby decreasing their performance levels.

Management said that cross-checking the printout with that of other operators convinced them that only Ms. Stroup could have tampered with all the documents changed. Also, no tampering took place during a week in the test period when she was on vacation, or the week she was suspended prior to being dismissed. Management said she had a motive to do this because she had been cautioned as a marginal performance earlier; that she knew how to perform the changes that were used to alter the document instructions; and that only she would benefit from the alterations made. Management summed up its position to the arbitrator by saying that the computer was a perfect and credible witness.

The Oregon Public Employees Union, affiliated with the Service Employees International, defended Ms. Stroup in the arbitration. They asserted that she had been performing satisfactorily for a year and had no recent warning about productivity; had no need for more pay or promotions; did not have the skills to do the deletions that were done; and, like other employees, believed that the Wang software could detect any improper acts done by operators. The heart of the union's defense was that there was not a single eye witness and no motive given for Ms. Stroup's alleged action, and that it violated due process concepts to accept the "hearsay evidence" of a computer, which cannot be "cross-examined." The union also argued that, because management had not installed available security software to prevent operators from deleting documents that others worked on, it had not provided the proper system from which to take action against alleged wrongdoing.

After reviewing the printout data, the testimony of the computer experts at the arbitration hearings, and the grievant's case, the arbitrator found the computer evidence to be "reliable" and ruled that its use "does not violate basic, procedural due process..."

> "While both the Union and the Arbitrator pointed out at the hearing that the Employer has no human witness to the charged activity, nevertheless the Employer does have a mechanical witness -- the computer.
>
> "This mechanical witness, without bias, has given a minute-by-minute account of the activity of the grievant on her work station (#32) for the two-week period in question. The computer is a tabla rasa on which the operator writes.
>
> "The Wang software package, the Machine Statistic System ("MSS") silently monitors, 24 hours a day, the activity at each work station in the Employer's clerical support unit, including that of Work Station 32. The MSS, therefore, is the language in which the mechanical witness captured the activity on that work station during the two-week period in question.
>
> "The computer printouts described above are the translated record of what the computer 'saw'. The computer made a record of the events of those two weeks (and of the period July 1, 1983 through July 8, 1983 and during the work week July 25, 1983 through July 29, 1983) as if it were a tape recorder or a videotape, running constantly and focused on work station 32, without human intervention.
>
> "It is from a reading of this mechanical witness's record that the most damaging evidence against the grievant comes."

The union Business Agent who prepared the Stroup defense sees the implications of the arbitration decision as very serious.

> For our members, the big issue here is control. There are many employes out there working with computer systems which are not secured in any way, and which monitor their production. This makes them highly vulnerable to sabotage themselves. There is no question that another employee or supervisor who wished to get rid of someone, could frame a person by manipulating the software. As strong as the computer evidence was in this case, it did not completely rule out this possibility. I think this is something employees should be alerted to. I think it would also be valuable for employees to find out exactly what kind of data is collected on their work through the computer tracking systems.

Proposals for Legislative Control of Employer Monitoring

Bills to regulate VDT use have been introduced in 25 states between 1981 and the present. These have been sponsored primarily by labor unions, supported by activist women's groups, local COSH chapters, and some occupational health experts. The bills generally contain three sets of provisions: on health and safety matters, on ergonomic standards, and on work rules for intensive VDT use.

In seven of these state bills, and in the model bills drafted by the Communication Workers and the Newspaper Guild for use in all states, a one-sentence provision appears that would forbid employers to use "individual production monitoring." This has been included in the VDT bills in Ohio, Minnesota, Massachusetts, Pennsylvania, California, Illinois, and New Jersey. The Ohio bill, for example, reads: "No employer shall use a video display terminal to monitor the productivity or measure the performance of an operator on an individual basis.," and a similar sentence appears in the 1985-86 Tennessee bill.

At committee hearings on these VDT bills, the witnesses supporting them have called for the anti-monitoring provision because of the harmful stress that monitoring is said to create, and the violation to dignity and privacy that "total, Big Brother surveillance" entails. They have said that while some "good" employers do not use monitoring in an oppressive way, the law is needed to reach the many "sweatshop offices" doing this to employees. Employer witnesses have denied that there is the widespread "Big-Brother"-type use of VDT monitoring alleged by union witnesses, insisted that record keeping on employee performance is vital to increasing productivity, and said that any regulation of work standards and measurement should be left by state legislators to labor-management negotiations in unionized firms or to employee relations in the non-union sectors.

None of the VDT regulation bills have passed as of mid-1986. The only state government recommendation regarding monitoring so far has come in Connecticut, where the legislature in 1983 had ordered two studies of VDT health and safety aspects to be done, one by the Connecticut Academy of Science and Education, and the other by the State Department of Consumer Protection. The report of the Consumer agency included two recommendations to employers:

* they should not conduct continuous monitoring of individual employee performances through VDT software capacities; and
* monitoring or recording the conversations of VDT customer-service operators should "be discouraged."

Nothing was done with this recommendation by the Connecticut legislature in 1984 or since. There are no signs that the 1986 campaign will go any further than the earlier efforts. Basically, the regulatory campaign has not succeeded because many liberal legislators, and most middle of the road and conservative legislators, have not been convinced that there is a sound health hazard case against the machines per se, based on scientific studies of radiation and other emanations from the VDT.

As for the passage of a law to require ergonomic measures and detailed work rules (including bans or limits on work monitoring), most legislators thus far have felt this was not an appropriate step for state legislators to take at this time, when use of VDTs is still in an early stage, managements are learning what measures need to be taken for comfort and ease of use, and the technology is still changing and developing so rapidly. In addition, witnesses for the major vendors and user groups have warned that the regulations proposed would be extremely expensive for employers to comply with, and most state legislators are not anxious to "drive business away" (especially high-technology users) unless there is clear and convincing evidence that this is necessary to safeguard worker health and well being. Unless this basic situation changes in 1986, passage of the omnibus VDT bills, and of anti-monitoring provisions in particular, does not seem likely.*

KEY ISSUES IN VDT WORK MONITORING

Unlike the use of TV-monitors to watch assembly lines, or of hidden microphones to overhear workers in cafeterias or rest rooms, the collection of operator production statistics generated by system software does not represent an intrusive, unethical, or dehumanizing act per se. Whether the effect of monitoring is intrusive, unethical, or dehumanizing depends on what management does with the data it collects and how its actions are perceived by employees.

In terms of polar positions, we have seen that there are two main models of work standards and measurement, the "union model" and the "Taylor production model." Figure 7 shows the key elements in these presentations, and which of the issues they raise are privacy-related, rather than employee and labor relations based.

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* The CWA persuaded the West Virginia legislature to ban telephone service monitoring (on intra state calls) in 1981, after a well publicized example of what the union called "nasty company behavior" by the local telephone company. A similar bill was vetoed by the governor in California, and was considered in New York in 1985 but was not enacted. The West Virginia law does not mention VDTs and was not written with OA technology in mind.

Figure 7. TWO MAIN MODELS IN VDT WORK MONITORING

UNION MODEL	Indiv. Performance Sampling	All Data Available To Employee	Known Procedure For Challenging "Record"	Employee Can Pace Work	Group Production Quotas	Quality/Problem Factors Recognized	Standard Pay	Individual Shortfall Leads To Training Or Group Discussion
"TAYLOR" PRODUCTION MODEL	Constant Machine Monitoring	Data Not Readily Available	No Procedure For Challenge	Machine Paces Work	Individual Quotas	Quantity/Speed Standard	Piecework Pay Or Bonus	Individual Shortfall Leads To Discipline

PRIVACY-RELATED ISSUES:	LABOR RELATIONS / EMPLOYEE RELATIONS ISSUES:
"Intrusiveness" And "Subject Access"	"Fair Work," "Fair Pay," "Fair Performance Evaluation"

We do not know of any unionized firm in which the full union model is being used. We saw the Taylor model used in some of the sites we visited, though these were a very small number among the kinds of government and private organizations we were studying.

At the great majority of our sites, about two-thirds, we found that organizations were using significantly modified versions of the Taylor model, as we described in our reports of monitoring use, while about a third were applying what we have called fair work evaluation techniques.

In practice, as we found during our site visits, the difference between employee protests over "Big Brother surveillance" and employee acceptance of work measurement as reasonable depends on whether there is agreement between employers and employees on: (1) the fairness of the standards set; (2) the fairness of the measurement process employed; and (3) the fairness of the way measurements are used in employee evaluation.

Putting the issue this way highlights the fact that both process and substance are involved in how employees will respond to work monitoring issues in the automated office. In terms of process, we saw many examples where genuine involvement of employees — either through joint labor-management committees in unionized organizations or employee-involvement techmqiues in non-union settings — could have spared management painful experiences with employee resistance and protest over work monitoring that is effective and acceptable to employees started with the trusting assumption that almost all employees are ready to put in a fair day's work for a fair day's pay. The challenge they accepted was to involve employees in the application of new office systems technology to the office tasks at hand, and to include work standards, work measurement, and productivity-recognition as matters open for joint discussion.

Recognizing that employee involvement in the initial design, testing, implementation, and continuing adjustment of work monitoring is critical to a successful process, what are the substantive issues that innovative managements seem to be considering in their administration of VDT work, especially in their clerical and customer-service jobs where VDT use is most intensive?

Figure 8 shows the issues that we encountered in our site visits, and which we found about a third of the managements taking into account in developing employee-acceptable productivity programs using machine generated records.

Figure 8. KEY ISSUES AND PROBLEM AREAS IN MONITORING CLERICAL AND CUSTOMER SERVICE WORKERS

KEY ISSUES	PROBLEM ASPECTS
1. FAIRNESS OF WORK STANDARDS	* Do standards fairly reflect the average capacities of the particular work force? * Will they create unhealthy stress for many employees? * Do they take into account recurring system difficulties and other workplace problems? * Do they include quality as well as quantity goals? * Do they represent a "fair day's pay" for a "fair day's work?" * Do employees share in any productivity gains achieved through introduction of new technology?
2. FAIRNESS OF THE MEASUREMENT PROCESS	* Do employees know and understand how the measurements are being done? * Can the measurement system be defeated easily, thereby impairing the morale of those willing to "follow the rules?" * Do employees receive the statistics on their performance directly, and in time to help them manage their work rate? * Is the relation between quality and service measures and work quantity communicated by supervisors when they discuss problems with performance levels with employees? * Do supervisors communicate clearly that they are taking system and workplace problems into account? * Are group rather than individual rates used when particular tasks make such an approach more equitable? * Is there a formal complaint process by which an operator can contest the way work data has been used by the supervisor?
3. FAIRNESS IN APPLYING MEASUREMENTS TO EMPLOYEE EVALUATION	* Are there meaningful recognition programs for these employees? * Is work quantity only one of a well-rounded and objective set of performance criteria used for employee appraisals? * Does the employee get to see and participate in the performance appraisal? * Is there an appeal process from the supervisor's performance appraisal? * Is there a performance-planning system that identifies employee weaknesses in performance and identifies ways to remedy such

The three issues that we have presented in this chart and specific problems involved, were themes we heard in many of our employee interviews, in both union and non-union organizations. They also reflect the concerns that we heard organizations with good employee relations programs or good labor relations beginning to address in 1982-84, during our site visits. And, as we have noted, about a third of those organizations we studied that are using monitoring of some individual clerical operators for evaluative purposes are already following fair work evaluation policies along the lines covered by a positive answer to the "problem aspects" listed in this chart.

From a privacy standpoint, the key elements of fair work evaluation policies are employee knowledge of all monitoring systems used, and their operative elements; employee access to their individual records; and a procedure for contesting the accuracy or fairness of applying records for evaluative purposes. If one adds to that the "non-privacy" but good employee relations aspect of employee involvement in setting fair standards and good employee-manager communication on the planning and implementation of standards, then good employee practice would seem to be present. The parallel between these elements and the Equitable-SEIU contract should be noted.

One judgment we reached in our site visits should be useful to OTA. While managements will no doubt continue to follow divergent approaches to VDT monitoring, for the reasons cited on pages 70-74, there seems to be a growing sense in the business community, and in government also, that appropriate work measurement policies need to be developed if organizations are to achieve the machine efficiencies and the worker commitment which — together — can achieve the productivity and commitment goals that employers are seeking at their workplaces. A good presentation of that emerging sense, and one that comes from a mainstream business publication, rather than a reform source, comes from a 1984 article on Dun's Business Month magazine.

WARNINGS FOR MANAGEMENT IN USING COMPUTER MONITORING*

> The negative effects of electronic monitoring are a growing concern. Some experts believe that the problems involved far outweigh the benefits in the long run. And many employees complain that the new technology is both forcing them to function in a more stringent work environment and adding to their stress on the job. "Workers are concerned that they will be pushed beyond reasonable limits to gain productivity," explains Donald Kennedy of Pennsylvania State University's Department of Labor Studies, "and that monitoring and pacing are creating a factory in the office."
>
> The health effects of monitoring and pacing are being studied by the National Institute for Occupational Safety and Health, the research arm of the Occupational Safety and Health Administration. According to NIOSH researcher Michael Smith, studies have shown that monitoring and pacing produce anxiety, depression, irritability and anger and that these reactions can in turn lead to heart-related disorders and psychosomatic illnesses. Physical stress is also a problem. For example, typists who work with computer screens can be physically affected when straining to maintain a pace; they get temporary eye ailments and swollen wrists and arms, which in turn reduce their productivity.
>
> In a study of 2,150 American workers financed by NIOSH to examine the links between pacing and health, it was found that machine-paced assembly line workers are 70%-to-200% more likely to develop heart disease than their supervisors. And workers who are under pressure to produce and have little control over the job are five times more likely to develop heart disease than workers who have the most control over their jobs...
>
> Many academic studies have also demonstrated that quality suffers as a consequence of making a job simple enough to monitor, points out Frederick Herzberg, management professor at the University of Utah's graduate school of business. Herzberg, an eminent authority in the field who has acted as a consultant to AT&T, says the studies show that work simplification makes people act less responsibly and increases errors, job dissatisfaction and even sabotage. "And supervisors are animal trainers rather than managers," he adds.
>
> In large part, the fight over monitoring is a power play in which the strong win. In other words, unionized employees and

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* From "Corporate Big Brother Is Watching You," Dun's Business Month, January, 1984.

professionals such as doctors are more successful than word processors or bank clerks in fending it off...

Monitoring is now a major issue in the bargaining between Equitable Life and the claims processors at its Syracuse, New York, office. While the claims approvers like the wage increases made possible by the computer counting, they want approval over the measuring standards used. They argue that they do not understand the method Equitable uses for scoring and they question its fairness. They also fear that when they reach peak performance, their wage increases will not keep up with inflation.

Local 925, which represents the Equitable workers, recently introduced bills in both the California and Ohio legislatures to regular working conditions for operators of computer display terminals, including provisions to bar individual employee monitoring. Legislation regulating telephone surveillance was enacted in West Virginia in 1981 through the efforts of the Communications Workers of America. The law requires employers to use a beeptone to inform customers and employees they are being monitored. In California, Republican Governor George Deukmejian recently vetoed a similar bill.

But the Big Brother techniques are not all-powerful. "For every system, there is a way of beating it," points out Gerhard Friedrich, a consultant who studies the impact of automation on management organization at Digital Equipment Corp. Most consultants agree that employees can circumvent even the most sophisticated electronic snoops. In one of the most common practices, says Thomas Gilmore of the University of Pennsylvania, employees "rest" by getting headaches when they are forced to work at a pace they think is too fast.

It is also well known that long-distance and directory assistance telephone operators love to outwit AT&T's monitoring system, which supplies a computer-generated AWT (Average Work Time) score on the average number of seconds each operator spends per call. They cheat by hanging up on callers or by transferring them to a supervising operator even when they could handle the inquiry themselves...

/S/ome experts argue that by promoting speed, the measuring of service worker productivity actually defeats its purpose. Cost-benefit analysis, they say, is skewed to measure quantity not quality and short-term but not long-term costs and benefits....

Vice President Carl Thor of the American Productivity Center, a private research organization, further points out that since the routine jobs most often monitored are already automated to increase productivity, not much additional improvement is possible by measuring employee performance. The computer equipment installed to run operations produces the lion's share of any productivity gains, agrees Mitchell Goldstein, office automation consultant at Environetics International, yet the monitoring is frequently mistakenly used to justify the whole expenditure.

Sears, Roebuck & Co., for one, believes the costs in employee morale outweigh the productivity gains in most cases. Therefore, it monitors each call in its catalog sales division for everything except employee performance. According to George Eaton, director of catalog sales, Sears uses individual employee performance reports only to identify personnel that need help and to tally performance on sales promotions. "It really boosts morale to have a contest based on sales per call," he says.

The key to effective monitoring, experts agree, is to convince employees that the measurement system is fair and can't be subverted. American Express, for one, uses outside consultants to make sure its expectations are not unrealistically high or low. "Management must be careful not to push either side [production or quality] too hard," Sherin says.

American Express also has used quality circles to involve employees in setting quality standards in order to gain their acceptance. Such employee cooperation is critical, says Frederick Herzberg, "because while speed is under the control of the system, quality is under the control of the worker."

With employee support, Carl Thor adds, service industries should be able to avoid the loss of competitiveness suffered by manufacturing companies in sacrificing quality to quantity. Competition in the service industries is primarily domestic, but the competitive danger is the same, he observes. "In the drive toward survival, the companies that put cost savings and quantity before service will be at a disadvantage."

POLICY CHOICES IN WORK MONITORING*

As we have shown, the issue of work monitoring in office automation is a highly charged topic. Sharply conflicting positions have been adopted by employers, unions, interest groups, and social commentators. There is considerable debate over how much VDT monitoring of clerical workers is going on today and whether this is increasing or decreasing. There is debate over whether the monitoring that is being done is mostly being carried out in a Taylor-style high-control fashion, a moderate productivity model, or with new fair work evaluation policies. There is also debate over how to evaluate the additional work stress that VDT operators experience as a result of monitoring, compared to that created by fears over job security, high production demands, poor job design, inadequate ergonomics, and other negative workplace conditions. Our report has presented OTA with empirical and evaluative materials with which to analyze these issues, as they have emerged in the past 4-5 years.

At the policy level, American society faces the classic question of whether this issue is one on which law and regulation is called for, or whether it is best left, for the time being and in the early stages of office automation, to private decision-making and social forces. We have indicated the positions of leading parties on that issue, and the baseline of very limited regulation that marked the pre-OA position of American society.

As far as the privacy dimension of VDT work monitoring is concerned, we have shown that there have been protests over what is regarded as unfairly close, intrusive, and continuous surveillance by "machine monitoring" at the workplace, even though this is not a private location and even though what are normally defined as private acts are not involved. These protests rest on the belief that employees working in locations subject to casual observation and traditional record keeping have not agreed to — nor should the law, they believe, assume that they ought to accept — the kind of "total" monitoring that office systems software makes possible. We have shown that this challenge faces an uphill battle against the well-settled arbitration and legal-policy judgment that close employer supervision, even by video camera, does not violate legitimate employee privacy interests.

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* As readers will have noted, our analysis has been limited to monitoring in office settings, which is what our discussion was asked to treat. However, many of the same issues and social conflicts obviously arise in factory settings, and debates over factory-worker monitoring have a long history. For a critical look at "Office Automation in a Manufacturing Setting," OTA has the report of that title by Leslie Schneider, Robert Howard, and Frank Emspak, April, 1985, prepared for OTA's Automation of America's Offices Project.

While this may be the way that arbitrators and judges would decide grievances and lawsuits, absent new legislation, this does not necessarily mean that such would be wise social or public policy. We have shown that whether the collection of detailed performance and presence data is regarded by employees as intrusive and unfair is almost always a function of how it will be used by the employer. Where employees know what is being done, have access to their own records, and have a process by which they can contest the accuracy or the fairness of specific data used for evaluative decisions, we have seen that the privacy dimension of VDT work monitoring has generally been satisfactorily addressed.

This suggests that VDT work monitoring is a "two-faceted" issue. Privacy can be thought of as the threshold question. But equally important to employee, employer, and society, is the employee relations or labor relations dimension, where questions of harmful stress and its health effects, fair production standards, fair supervisory behavior, and the even more contentious question of "fair pay" are all involved.

Both of these issues promise to be important concerns on the American social agenda for years to come, since they involve the quality of work life for millions of employees moving into high-technology office work, as well as the future productivity of American organizations in an era of heavy pressures for more cost-effective operations.

EMPLOYEE CALL-USE MONITORING

Background

Monitoring of employee telephone use to detect or inhibit personal, non-business uses of the telephone has become important to both public and private organizations in an era of cost-containment through reduction of unnecessary operating expenses. The costs of local and long distance telephone calls is a major expense for most organizations, and most have issued rules to their employees stating that the telephones are to be used only for proper business calls. While many organizations have accepted a "tolerable" level of non-business calls -- to the employee's home on pressing family matters, to check on the weather for driving conditions, etc. -- employers in the past few years have grown increasingly concerned about the extensiveness and high cost of such non-business calls.*20 As a result, both public and private employers have begun educational and then enforcement efforts to roll back such prohibited telephone use. While we are not aware of any surveys of employer use of telephone-use monitoring, informal conversations with several large business corporations and government agencies indicated that (a) this was a serious concern to them; and (b) various forms of sampling and auditing of call records had been conducted in recent years, and were continuing.

To explore the privacy implications of this growing employer activity, and also because of the key role that the federal government plays as an employer, we will focus on one current program for auditing employee telephone use, being conducted by the President's Council on Integrity and Efficiency (PCIE) and the General Services Administration. We will also develop this case study by incorporating in our narrative some of the key documents or segments of documents that illustrate how the privacy issues presented by this effort were first

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* (See Exhibit, next page (115A).

Exhibit: U.S. NEWS & WORLD REPORT, Sept. 29, 1986

Bosses have a new weapon in fighting phone bills

Putting social calls on hold

Soon after installing software that tracked employe telephone calls, managers at a Los Angeles insurance company noticed a puzzling pattern. Each day at noon, someone at the firm dialed a number in nearby Orange County. Each call lasted 58 minutes. The file clerk stationed at that extension was asked to explain the matter. Her answer: Every day she called her mother, who put the phone down beside the television set in her home so that her daughter could listen to her favorite soap opera.

That incident illustrates how employes misuse company phones, says Duffy Mich, president of RTP Group, Inc., a telecommunications-consulting firm in Pasadena, Calif. Although social calls during office hours aren't that extreme everywhere, they can be a big problem.

Telecommunications consultant Daniel Stusser estimates that 10 percent to 30 percent of calls at most companies are not work related, but range from minor infractions such as "calling Grandma every day at lunchtime to running a side business." A recent government survey found 29 percent to 50 percent of long-distance calls by employes at five federal agencies were personal.

Now, employers can do something about it. Thanks to the computer industry, software that can track information about employe telephone calls is widely available. These telephone-monitoring devices or "call accounting" systems track the date, time, location, duration and price of outgoing calls by employe phone extension.

Sales are ringing up for call-accounting hardware and software—$213 million worth of equipment was sold last year, up from $25 million in 1980. More than 63,000 businesses use call-accounting systems, which have the potential to generate reports on as many as 7.8 million employes, says Stusser.

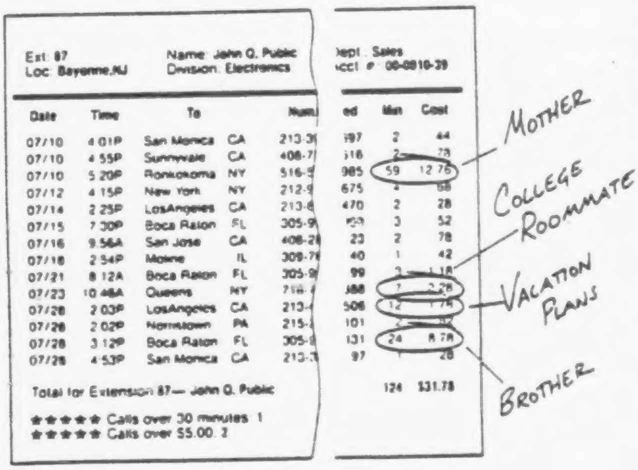
The monitoring systems do more than spy on employes. They can route long-distance calls through the cheapest long-distance carrier, track phone expenses incurred for each client, reorder inventory and trace incoming calls from a competitor, a branch office or other precoded telephone numbers.

Generally, company phone bills drop 20 percent to 60 percent in the first month after a monitoring system is installed, says James Burton, president of Control Key. "But whether or not the bills then creep up to previous levels depends on how closely managers scrutinize the reports," he cautions.

A call-accounting system for a company with 500 extensions can cost up to $80,000, depending on its bells and whistles. But companies typically spend between $5,000 and $15,000, says Harry Newton, publisher of an industry magazine, *Teleconnect*. Dropping prices have spurred sales. For instance, the price of Control Key's call-accounting system, which can handle 60 office extensions, fell from $15,000 in 1981 to only $3,000 this year.

Although many employes resent electronic watchdogs, bosses say they are entitled to monitor how company time and money are being spent. After all, they argue, employes are held accountable for travel, entertainment and other expenses; why not telephone use, too?

The deterrent effect of a monitoring system is so powerful that employers don't even have to plug one in to slash phone bills. Publisher Newton tells of one company where employes were instructed to dial the company operator to place long-distance calls. "The operator was told to ask if the call was personal or business, but to put it through in either case," Newton says. "Instead of answering, 50 percent of the people banged down the receiver after the operator's query."



Ext: 87
Loc: Bayonne,NJ

Name: John Q. Public
Division: Electronics

ept.: Sales
cct #: 00-0810-39

Date	Time	To		Num	ed	Min	Cost
07/10	4:01P	San Monica	CA	213-3	397	2	44
07/10	4:55P	Sunnyvale	CA	408-7	516	2	78
07/10	5:20P	Ronkonkoma	NY	516-5	985	59	12.76
07/12	4:15P	New York	NY	212-9	675	4	68
07/14	2:25P	LosAngeles	CA	213-6	470	2	28
07/15	7:30P	Boca Raton	FL	305-9	[illegible]	3	52
07/16	9:56A	San Jose	CA	408-2	23	2	78
07/18	2:34P	Moline	IL	309-7	40	1	42
07/21	8:12A	Boca Raton	FL	305-9	99	3	1.18
07/23	10:46A	Queens	NY	718-4	188	7	2.28
07/28	2:03P	LosAngeles	CA	213-4	506	12	[illegible]
07/28	2:02P	Norristown	PA	215-1	101	[illegible]	[illegible]
07/28	3:12P	Boca Raton	FL	305-9	131	24	8.78
07/28	4:53P	San Monica	CA	213-3	97	1	28

Total for Extension 87— John Q. Public 124 $31.78

★★★★★ Calls over 30 minutes: 1
★★★★★ Calls over $5.00: 2

MOTHER

COLLEGE ROOMMATE

VACATION PLANS

BROTHER

aired, debated, acted upon, and remain in contention.

The Federal "Telephone Call Reduction Initiative"

In late February of 1985, news was released that two "telephone call reduction initiatives" would be carried out by agencies of the Federal Government. A later press release (March 19th) by OMB provided the official federal executive branch description of why this initiative was begun and how it would be conducted.[71]

TELEPHONE CALL REDUCTION INITIATIVES

Two telephone call reduction initiatives are under way - one by the resident's Council on Integrity and Efficiency (PCIE) and the other by the General Services Administration and OMB.

The President's Council on Integrity and Efficiency audit was recommended by the GSA Inspector General to determine the extent of telephone abuse and misuse and to recommend Governmentwide controls. The GSA Inspector General is a member of the PCIE and will coordinate the audit. Inspectors General of participating agencies will review the information collected during the audit as it relates to their agencies.

In support of the PCIE audit, GSA will provide call detail listings consisting of a 20% sample of FTS off-net and all commercial long distance calls made from participating Executive agency FTS telephones in the Washington area. No local and no incoming call data will be audited, except for collect calls charged to an FTS telephone. The listings are similar to those received in home telephone bills that show the originating number, destination number, date and time of day the call was made, and duration of the call. The content of the calls will not be known.

The General Services Administration management initiative originated in discussions between OMB and GSA on reducing administrative costs in Government. GSA, in cooperation with OMB and the Executive agencies, will make available to agencies detailed listings of long distance calls made from Government phones in the ashington, DC area initially. Call detail listings will be on magnetic tape for computer analysis by each agency to administer use of Government telephones within GSA policy guidelines.

Calls placed by the White House and the Congress are not included within the scope of either initiative. Calls involving national security conceivably could appear in the sample listings, but the content of the calls will not be discernable. In any event, the information developed during the PCIE audit will be controlled and safeguarded by the Inspectors General and their agencies to which the information relates.

To assist agencies in managing their telephone use, and as part of its initiative, GSA is developing a brochure for managers and supervisors on cost-effective management of telephones. GSA will incorporate in its brochure any appropriate recommendations of the PCIE for controlling telephone abuse or misuse. Recommendations of the PCIE on how to prevent possible violations of personal privacy will also be included.

In summary, the PCIE and GSA/OMB initiatives will address the reduction of the Government's long distance phone costs. Both will focus on long distance calls made from the Washington area. No telephone calls will be monitored, listened to or taped as a part of either of the call reduction initiatives. In both, only tings of calls and related material will be available. Neither will violate the privacy of any individual. The two initiatives will be coordinated.

March 19, 1985

When this news reached Capitol Hill, it prompted a letter on March 13th from Representatives Don Edwards (Chair, House Subcommittee on Civil and Constitutional Rights) and Patricia Schroeder (Chair, Subcommittee on Service) posing a series of concerned questions to OMB Deputy Director Joseph R. Wright, Jr. The two subcommittees wished the following information:[72]

> 1. What is the source of authority for the proposed monitoring scheme?
> 2. How would the monitoring program be conducted, who would conduct it, and what types of telephone calls would be examined?
> 3. How long would the program last?
> 4. What types of data or analyses would the program yield?
> 5. How would the resulting data and analyses be used and who would have access to them?
> 6. What measures would be taken to limit dissemination of the data and analyses?
> 7. What guarantee is there that the program will not be used to discourage whistleblowers, to stifle dissent, to limit news media access to information, or for other political purposes?
> 8. What would happen to the data dna analyses after the initial analysis is completed?
>
> Our Subcommittees would like to be assured on these points, and any others that may be raised as additional information comes to light, before any monitoring program begins.

News of the two-call-use audits also led to articles in leading newspapers and other mass media. David Burnham's piece in the New York Times, March 17th, was titled, "U.S. Phones Raise Issue of Privacy: New Equipment Would Provide Detailed Records of Calls." Bill Montague, in the Federal Times of March 25th, had his story headed, "Planned Phone Audit Brings Blast From Several Groups," while a May 9th story in the Washington Post was titled, "U.S. Agencies Use High Tech To Curb Workers' Phone Use: Savings Estimated at $300,000 a Year."

Burnham's article on March 17th noted that, in 1982, "investigators in the Environmental Protection Agency secretly examined the agency's long distance phone records to determine whether Hugh Kaufman, a government employee who had disclosed information that led to the removal of most of the agency's top officials, had talked with news organizations." An interview with Frank J. Carr of GSA indicated that while "new phone monitoring equipment" had already been installed by the federal government, Carr "was not aware of any agency that has rules spelling out the apprpropiate uses of information gained through the system." Carr felt that "events in the past have prompted legitimate concern" over privacy, and he believed "the Government should develop guidelines to make sure the technology is used in an appropriate way."

Montague's article in the Federal Times, a week later, reported that "union leaders, civil liberties activists, and several key congressional leaders" had reacted sharply to the announced PCIE phone audit. "This is another example of the Big Brother federal government at work" Rep. Edwards stated. "It's ominous and should not be implemented without congressional approval." Montague's round-up of the critics' positions included the following comments:

> Jerry Berman, legislative counsel for the American Civil Liberties Union, said that while the current project would have "a chilling effect on government service," he is more worried about the long-range implications of the technology involved.
>
> "The ability of the phone company to analyze phone traffic is getting better all the time," he said. The trend toward metered local service, he predicted, will soon make it possible for GSA to audit local as well as long-distance calls.
>
> "We are just a microchip or two away," Berman said, "from being able to do that easily and cheaply. Even if GSA decides not to check up on local calls, the fact that they might have that capability is very disturbing."

> Aside from the privacy issue, Schroeder and others also mentioned the potential for selective disciplinary action against workers considered undesirable by agency managers. They pointed out that if abuse is as widespread as GSA says it is, virtually every employee in the government is guilty to some extent.
>
> Robert Tobias, president of the National Treasury Employees Union, echoed that concern when he speculated that the audit process could be misused by agency managers as a way of harassing employees who use the phone to conduct legitimate union business.
>
> "We are very concerned that our people can continue to have contact with their union without any sort of harassment, or any sort of monitoring," he said. NTEU, he added, will attempt to use the Freedom of Information Act to find out how agencies are handling the data they receive from GSA.
>
> Mark Roth, general counsel for the American Federation of Government Employees, said that while his office is weighing a possible court challenge to the project, it is too early to construct a legal argument for such a case.
>
> "We may have to wait until they actually discipline someone and then to after it as an unfair labor practice," he said.
>
> Nor were critical comments limited to labor groups. Bun Bray, president of the Federal Managers Association, called the audit "another little deal to punish federal employees," and asserted that the savings from the program would prove "insignificant and minimal."
>
> "If they really want to save money, they ought to take those resources and check out General Dynamics and some of those other defense contractors that are ripping off the taxpayer," Bray said.

On April 12, 1985, Joseph R. Wright, Jr., Deputy Director of OMB, replied to Congressman Edward's inquiry.[73] Wright said the purposes of the PCIE review were "to reveal patterns of misuse of the Federal long distance telephone systems" and to develop "recommendations for systemic improvements in the management of these systems." He noted that planning for the sampling of call numbers recorded and examination of their business or non-business character "has not been completed."

> The PCIE is developing guidelines for the review that will resolve the privacy-related issues and will insure that appropriate protections are afforded employees and citizens. Moreover, to ensure that all privacy interests are addressed, OMB is also developing guidelines for the management of information on long distance telephone charges which will ensure that agencies comply with the Privacy Act to the extent that their management systems generate records covered by the law.
>
> In no instance will the PCIE "monitor," listen-in, or record telephone calls. The review will be based exclusively on automated billing data received from the phone company.

The responses that Wright provided to Rep. Edward's questions about privacy and whistle-blower protection were contained in answers 6, 7, and 8. These are reproduced on the following page.

6. What measures would be taken to limit dissemination of the data and analyses?

The dissemination of data used during the course of the review will be limited to the staff of participating Inspectors General. The bulk of the data will be placed in audit workpapers and used to support audit findings which are summary in nature. Any data which require initiation of an investigation will be treated as evidence and will be accordingly protected. Data which may bring together names and numbers will be filed as part of the IGs' Privacy Act systems of records.

7. What guarantee is there that the program would not be used to discourage whistleblowers, to stifle dissent, to limit news media access to information, or for other political purposes?

The procedures for conducting the review will include controls designed to protect individuals making such calls as contemplated by your question. The review does not involve local calls, so concerns about persons being singled out for their involvement with the news media, Congress, or whistleblower activities should be alleviated. In addition, long-distance calls to news media, Congressional offfices, public interest groups, etc., will be considered business calls for the purpose of this review.

The review is being performed by statutory Inspectors General who have, among other duties, responsibility under their own enabling legislation to protect whistleblowers. In addition, the Civil Service Reform Act clearly prohibits the kinds of activities described in your question and provides ample authority to the Government, primarily the Special Counsel to the Merit Systems Protection Board, to enforce such prohibitions. Thus, while there are no absolute guarantees that all persons will act properly, there are ample procedures to deal with those who are found to have committed such prohibited personnel practices or other similar acts of wrongdoing.

Finally, the PCIE and its individual constituent member Inspectors General will work with management officials of those agencies involved in the review to reinforce their awareness of the sensitivities and concerns about the appropriate use of data used in the review.

8. What would happen to the data and analyses after the initial analysis is completed?

The bulk of the data developed during the course of the review will be made part of audit workpapers and will be protected from disclosures to the full extent of the law. As indicated before, information which connects names and numbers will be made a part of files governed by the Privacy Act. Evidence developed during the course of any investigation will also be filed as part of existing Inspector General systems of records governed by the Privacy Act, and will be protected from disclosure unless otherwise provided by law.

On May 2, 1985, Reps. Edwards and Schroeder replied to Wright.[74] They indicated their appreciation that the PCIE "is sensitive to preventing unwarranted disclosures of information collected in any audit and to avoiding invasions of privacy," and were "pleased" that the PCIE "is developing guidelines for the conduct of its audit." Drawing on concepts that were in Wright's reply, and their own sense of proper elements to go in the guidelines, the two members of Congress listed the following principles to be embodied in guidelines:

1. The PCIE audit will not record or listen in on conversations.

2. The PCIE audit will be limited to long-distance commercial and FTS off-net calls. The audit will not consider local calls.

3. The audit will be a study of FTS abuse. As such, except where extreme cases of abuse are discovered, the audit will not be used to go after individual employees.

4. Disciplinary action, such as removal, suspension, demotion, or formal reprimand, should be taken only in extreme cases following appropriate warnings.

5. All employees shall be afforded advance written notice of the PCIE audit, describing the possible uses of the audit data and indicating what time period the audit will cover.

6. The guidelines and the notice to employees regarding the audit should include a clear definition of a personal call. All other calls, including but not limited to telephone calls to the press, congressional offices, and public interest groups, calls for "whistleblowing" purposes, and calls between union representatives and employees, should be treated as official uses of the FTS. (Deeming such calls "official" does not address, however, the fact that the Government will be able to determine who has called whom. The availability of such information and the ready means to analyze it remain in our minds the most troubling -- and yet unresolved -- aspects of the PCIE proposal.)

7. Before calls are classified as personal, employees shall have an opportunity to explain the nature of the calls.
8. All workpapers and records of the audit, whether computerized, written or printed, shall be treated confidentially. Data and documents identifying individual employees will not be disclosed outside the offices of the participating Inspectors General and will be destroyed immediately upon completion of the audit, except for cases that are referred for prosecution. Otherwise, only aggregate data will be retained.
9. Other appropriate safeguards must be established so that the audit is used as a device to reduce the cost of the government's telephone bill, and not as a way for managers to pry into the personal lives of employees or to find grounds for their removal.
10. The guidelines should clearly state that any official violating them will be subject to the full penalties of law.

The two Congresspersons also called on the PCIE to consider alternative measures for its audit that would be less threatening to privacy:

> In evaluating the audit results, we believe that attention should be given to developing alternative measures to curtail FTS misuse. For example, it would seem that individual calls only add to the cost of the FTS if they are made during peak periods, forcing the government to purchase more facilities to handle peak traffic. Announcing the times of peak use and investigating only long distance phone calls made during these times might do a great deal to reduce the incremental costs of the system. Another possibility that might be of value is "blocking" certain types of calls from being made, e.g., Dial-a-Joke, Dial-a-Porn, time and weather recordings.

Finally, the Congressional reply to OMB raised some broad questions about the future of new technology and telephone-call monitoring in the federal service:

> The proposed audit has brought to the fore several issues of broader significance that we believe must be addressed as the Government responds to technical and market changes in the telecommunications field. First, we do not believe that the Government should procure or install any service, feature, equipment or system that would permit recording or listening in on telephone conversations, except in those few instances, such as Veterans Administration service centers, where managers monitor the job performance of employees who give advice over the telephone.
>
> Similarly, the Government should not procure or install any service, feature, equipment or system that would permit it to obtain call accounting data on individual local calls. At present, we can see no justification for such a feature. We agree that the federal telephone system should be managed; but we do not believe that advancing telephone technology should be used to manage employees.
>
> In both cases, this is not just a matter of not "switching on" a device; rather, it should be a matter of making a policy decision not to have the technical ability to do so. We understand that some agencies are proceeding to acquire equipment that would allow local call accounting. We would like to know whether the privacy implications of the acquisition of such equipment have been considered.

By August of 1985, a detailed Memorandum had been prepared for the PCIE by Douglas H. Ginsburg, Administ~~rator for~~ Information and Regulatory Affairs of OMB, laying out "Guidance on the Privacy Act Implications of the PCIE Review of Federal Telecommunications System (FTS) Utilization."[75] This seven page, single-spaced "guidance" addressed both the privacy and the First Amendment, whistle-blower issues in detail, and embodied many of the safeguards and limitations raised earlier by Wright and in the Edwards-Schroeder letter. (The full text of this memo has been included in the Appendix to this Report.) These guidelines were adopted as the PCIE pilot audit progressed in the Fall of 1985 and the first half of 1986.

What is the current status of the PCIE call auditing and what issues are raised in future telephone-abuse monitoring in the federal service?

1. According to an April, 1986 interview we had with Benjamin H. Friedman of GSA,[76] the PCIE review is still "on going and under way." Sixteen different agencies were doing reviews, with 14 checking on utilization. Two agencies had issued individual reports to their managements. When all the reviews are in, OMB will do a unified report, with follow-up auditing recommendations and also an analysis of the privacy guidelines. This was expected to be done during the summer of 1986.
2. GSA's view of the March-May, 1986 "furor" was that some newspapers, some Congresspeople, and some public-interest groups "thought we were going to monitor the content of telephone calls." Since "we never planned that, there was no real privacy of communication issue." And, since "we always planned to follow Privacy Act rules on identified records" and "all other protections of federal employee rights, there was and is no real threat to anyone's rights."
3. The view of Congressional staff members, the ACLU, and some privacy advocates we spoke to in April-May of 1986[77] is that no such audit, even a "pilot" one, should have been instituted unless and until careful guidelines on privacy had been prepared and aired before the Congress. These persons believe that the intervention of the two Congressional committees, and the help they received from outside experts, led to "better and stronger protections being written into the OMB guidelines than would have appeared if this had been left up to the Reagan Administration."[78]

4. There is still considerable concern by critics over what will happen next. The problems involve the fact that adhering to the guidelines will be up to each agency when computerized call-number audits become a regular practice. In addition, there is no system being mentioned to provide "auditing of the auditors," to see that there is no harassment of dissidents, checking on contacts with the press, etc. Most importantly, critics feel that once the attention focused on the pilot test is finished, what will develop as the primary side effect of this cost-savings program will be a general "chilling effect" on federal employees in using the telephones. The fact that, at any time, an employee might have to explain to agency managers why his or her calls to a certain number were made is perceived -- in the often strained environment of federal personnel and labor relations, and of Congressional-Executive tensions -- as a computer capacity critics do not believe the federal government should be using in this way. Whatever may be acceptable in private employment, it is argued, federal employee-employer relations make it far more desirable to rely on automatically blocking out improper service numbers (dial-a-joke) and otherwise relying on education and honor-system influences in telephone use.

MONITORING OF PERSONAL COMPUTER (PC) USE

By the end of 1985, 15 million video display terminals (VDTs) were in use in the United States, with an estimated 10-12 million of these in office and customer service work. By 1990, between 60-70 million VDTs were expected to be in use overall. As Table 1 indicates, the penetration of desk-top terminals has been heavy in the white-collar occupational sectors, and is expected to rise steadily and significantly the rest of the decade. Over a third of all clericals, almost two thirds of all managers and professionals, and over three fourths of all technical workers are projected to be using VDTs in 1990.

Desk-Top Terminals by Occupation, in U.S.
Work Force

Occupational Group	Percent with Terminals	
	1985	Projected, 1990
Technical	55.9%	76.2%
Managerial	36.5	64.4
Professional	39.2	63.7
Clerical	25.0	38.5
Sales	16.6	32.7

Source: Newsweek Magazine, November 18, 1985, p. 71, from U.S. Department of Labor, Sanford C. Bernstein & Co.

Since we have already discussed the monitoring of VDT use by clerical and customer-service workers, it is employer oversight of intelligent desktop terminals -- which we will refer to as PC's -- that we are examining in this section.

What employer interests in professional, technical, sales, and managerial use of PC's might give rise to monitoring efforts? Three primary ones have already surfaced in the private and public organizational world:

1. Abuse of PC's (using company resources for personal purposes);
2. Confidentiality-security breaches;
3. Violation of legal/regulatory duties in use of client or employee data.

In a previous report to OTA, we presented a lengthy and detailed account of how privacy and security dimensions of PC use were developing in 1980-1984.* In preparing for this report, we recontacted 7 companies (3 banks, 2 insurance firms, 2 manufacturers) and 3 government agencies and asked them, under a promise of confidentiality for their replies, the following questions:

- Do you do any inspections or searches of PC-user disks or files, in the interest of privacy, confidentiality, or security interests?
- Are you doing any auditing of PC or intelligent-terminal transactions with the mainframes, downloading and uploading, etc.?

None of the 10 were doing any inspections or searches of PC-user disks or files, though all said they felt they had the legal right to do so, and would not hesitate to do this if a specific rule violation or compromise took place and they needed to investigate this. A typical comment by one Information System Director was: "We have issued a policy guide for privacy and security compliance in PC use, and have stated that the company reserves the right to inspect all PC files and materials bought by the company and used here for our business purposes. But we haven't felt it wise or necessary to swoop down on people and demand to see what they have on their disks."

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* Westin, Alan F. and Hoffman, Lance, Privacy and Security Issues in the Use of Personal Information About Clients and Customers on Micro and Personal Computers Used in Office Automation, OTA, February, 1985.

On the other hand, all of the 10 executives said their organizations did auditing of PC/intelligent terminal transactions with regional or central databases. These were part of the regular, user-password-based security procedures of mainframe/database management. The monitoring consisted of (a) followup of any unusual use patterns indicated in regular audit-trail records; or (b) ad hoc inspections of audit records to identify use levels and local-use patterns. End users are informed (in all the organizations) that such auditing is conducted.

As for assuring end-user compliance with legal and regulatory rules governing an organization's handling of personal client or employee data, four of the ten organizations contacted reported they had issued written policies to PC end-users restating such requirements (e.g., Fair Credit Reporting Act; state employee access to personnel records laws; confidentiality of medical information laws; etc.). However, none of the 10 reported that they have done surprise or announced inspections of disks or other desk-held file materials.

We conclude from this small sampling, and also from discussions with computer security experts, that there is very little if any systematic employer monitoring being done of the substantive materials about clients or employees being input and stored in end-user intelligent terminals.

COMPUTERIZED PERSONNEL DATA SYSTEMS

Unlike the situation in Europe, reported in our Task 2 document, U.S. unions and privacy advocates have not been concerned in the 1980's about the automation of personnel data by employers. We examined the newspapers of 32 U.S. unions over the past four years, and found no articles or editorials dealing with this issue, compared to a steady stream of articles about monitoring of VDT workers. Since there has probably been more automation of personnel data in the U.S. than in any other industrial democracy -- a function of marketing by software firms of human resources information systems and also of complex reporting duties for employers under EEO, Erisa, etc. -- it is important to explore why personnel data systems have not generated concern.

First, the main focus of privacy issues in employer use of personnel data has been on specific, substantive issues, not automation per se. Thus provision of individual employee medical data to OSHA investigators, or Department of Labor demands for an entire computerized personnel tape from Prudential Insurance, or various rights-of-access by employees to examine their files exemplify issues of the past decade. And, unions and privacy advocates have been in the forefront of enactment of state employee access to records laws. But, unlike the Europeans, registration and Data Commission oversight of employer automated data systems has not been pursued in the U.S. Only in the VDT area have U.S. unions sought to borrow the "data steward" approach from the European privacy-protection systems.

Secondly, existing employee privacy and EEO laws, plus the widespread privacy codes that employers have instituted for handling employee records, seem to be functioning as an adequate framework given the lack of publicized employer abuse of personnel data systems. Only in the area of computer matching by state and federal government of automated personnel files with welfare, tax, and other records has there been significant concern by civil liberties groups. This issue has already been examined in other OTA reports, and is not a topic that will be treated in this report, essentially because it is not employer monitoring of workers but government law enforcement activity that is involved.

OVERALL LEGAL AND POLICY ANALYSIS OF EMPLOYEE MONITORING

Recap of Findings Thus Far

We have noted that there are a number of new applications of communication and computing technology at the workplace that require American society and its policy-makers to reassess the definitions of acceptable and unacceptable monitoring of employee actions, speech, or behavior. These new applications include work tools (the VDT or dataphone); data-analysis applications (computerized telephone-number audits or computer-based locating/access systems); sound or picture surveillance tools (increased uses of closed circuit TV, activation of microphones in communication devices); and computer-based devices for measuring employee physical states (brain waveform patterns for detecting effects of drugs or alcohol).

In looking over these new or improved areas of potential monitoring, we have suggested that a sound public policy analysis should do three things: (1) identify potential abuses by extrapolating from known instances of previous employer misconduct or abuse; (2) examine existing legal rules and concepts, to see how new technological applications are likely to be regarded under current American law; and (3) consider whether new American social values or concepts of proper employee-employer relationships suggest that new legal or ethical standards should be actively considered by policy-makers.

Extrapolation From Previous Employer Conduct

There is no evidence from the 1960-1985 period which suggests that either private or government employers in the United States have wanted to or have tried to conduct total visual or acoustical surveillance of their workplaces and workers. In reality, such efforts would be very costly, would surely have prompted worker anger, and would have been featured in the American press as outrageous conduct. The occasional revelations in past decades of wiretapping, room-bugging, or TV-monitoring of selected places or selected workers makes two decisive points: (1) general and continuous surveillance of speech and actions has not been practiced; and (2) secret or covert monitoring has generated problems and controversy for those employers who attempted it, and even some new laws or judicial decisions circumscribing such activities.

Classifying the main applications of monitoring at workplaces in the recent past, we can identify five areas of employer use:

1. Work-performance monitoring
2. Investigation of crime or misconduct
3. Conduct of general security functions
4. Monitoring of union activities
5. Investigation of dissenter/dissident activities

In the first three areas, American society has accepted a legitimate employer need for relevant monitoring, and therefore has generally recognized employer authority to conduct such activities. American law and social condemnation have focused in the past on instances of excessive or abusive use of monitoring in those situations. The last two areas are ones in which law and social norms have established either "privacy" or "First-Amendment" exceptions to the private-property, public-activity, and employer-prerogative acceptance of employer monitoring rights.

Looking at these five areas in the past, and at early trends in using the new monitoring capabilities discussed earlier in this report, we drew the following judgments:

1. In work-monitoring, only a small minority of employers are now using VDT work monitoring in oppressive and intrusive ways, and there is no evidence of growing abusive use.

2. There are strong signs that economic and social pressures for organizational expense-reduction are leading many private and public employers to (a) redefine what is "acceptable" or "tolerated" employee theft, abuse of organizational property, or personal appropriation of organizational services (telephone, computer time, etc.); (b) issue new or toughened rules about such conduct; and (c) mount new or expanded monitoring or auditing campaigns to detect such employee misconduct. Similar expanded campaigns are taking place in detecting substance abuse by employees through various testing methods. There have been in past decades and we can predict there will be in the future significant potential for abuse of such monitoring by some employers -- unless clear limiting standards, exposure of abuse, and enforcement against abusing employers are present.

3. Use of location monitoring for general security purposes (to prevent outside entries, assaults on employees, etc.) is increasing; however, we are not aware of any stream of abuses taking place in which employers used location monitoring to violate First Amendment rights, violate union rights, or intrude on basic privacy-dignity interests.

4. Monitoring of union activities has taken place regularly in the past, in all kinds of industries and in various sizes of establishments. Labor boards regularly wrestle with grievances involving surveillance of union organizers or of union negotiating or strike-related activities. We should expect that new monitoring capabilities will be utilized here by such employers, and should therefore take the investigation of such potential misuse as an important task. If new monitoring applications in this area prove to be widespread, new laws or new enforcement techniques may be needed.

5. Employer monitoring of dissenters and whistleblowers has a long history; it should be seen as a continuing struggle between the legal holders of organizational authority (and legal responsibility) and those who allege either legal or moral wrongdoing by such managers. The fact situations and the legal/ethical parameters of such contests are rarely clear or unidimensional, and only the classic True Believer or total ideologist will assume that all whistle-blowing is always right and moral and that all employers responding to self-appointed whistleblowers are always covering up wrongdoing. Having made this point of constant relativity in whistle-blowing situations, we can still assume that (a) managements rarely tolerate whistleblowers; and (b) managements generally seek to monitor what whistleblowers are doing. Therefore, any increased power to monitor employee locations, transactions, or expressions can and probably will be used by many employers caught up in whistle-blowing episodes, unless clearly and directly controlled by legal rules and their enforcement. (We should note that whistle-blowing is primarily a First Amendment issue of

what employee speech or conduct is to be protected, with monitoring usually a subsidiary issue of what the employer is to be permitted to do beyond normal management practices to learn what the whistleblower or dissident is doing or saying.)

The Current Legal Status of Monitoring Activities by Employers

American law is a complex "web" of rights and duties, powers and limitations, and, most of all, balancing mechanisms or tests for weighing conflicting rights and interests. In describing what monitoring is "legal" under existing law, we must consider federal and state constitutions; federal and state legislation; federal and state regulatory-agency or executive-agency rules and regulations; common law doctrines (in 50 states); and various semi-public bodies of authority (labor arbitration, organizational codes, etc.).

Rather than start with a general (and lengthy) exposition of employee privacy rights under current American law, it seems more appropriate to provide a characterization of the legal status of the employer monitoring activities involved in this OTA project, and then explain the basis for those judgments. The following chart presents our analysis of the current legal status and also the specific privacy-related claims or interests of employees involved in each of the listed employer activities. (The final two items are hypothetical (but technologically possible) activities included to clarify the legal/ethical analysis.)

PRESENT LEGAL STATUS OF VARIOUS MONITORING TECHNIQUES APPLIED TO WORKERS, AND RELEVANT "PRIVACY" CLAIMS INVOLVED IN EACH SITUATION

Code: CL = Clearly Legal
LI = Legal If Done for Proper Employer Purpose and through Reasonable Means
PI = Probably Illegal

MONITORING ACTIVITY	CURRENT LEGAL STATUS	PRIVACY-RELATED VALUES OR CLAIMS INVOLVED		
		Speech/ Assoc.	Freedom from Un-reason. Search	Privacy of Commun. or 3rd-party privacy
Monitoring of VDT-user work performance	CL		x	
Monitoring of telephone performance by customer-service operators	LI			x
Monitoring employee personal calls	LI			x
Sound monitoring of employee speech at work sites	LI	x	x	
Sound monitoring of employee speech in places where employees have "reasonable expectation of privacy"	PI	x	x	
Closed circuit TV observation of work sites and public areas	CL	x	x	
Closed circuit TV observation of places where employees have "reasonable expectation of privacy"	PI	x	x	
Use of automated location devices for access/security purposes	CL		x	
Use of automated location devices for personnel or investigative purposes	LI	x	x	
Computer auditing of telephone numbers to detect abuse of telephone rules	LI	x	x	x
Computer auditing of telephone numbers to detect dissenters/whistleblowers, etc.	PI	x		
Computerized brain-wave analysis for substance abuse testing	LI		x	
Random search of end-users PC disks or files	LI	x	x	
Audit of end-user transactions to mainframe or other terminals	LI	x	x	
Monitoring of brain-wave indications of attention or mind-state of employees	PI	x	x	
"Wiring up" of entire employer premises to listen to or photograph any employee activities of interest to management.	PI	x	x	

If we rearrange this chart into a listing of what employer monitoring falls under the three categories of clearly legal, legal if done for proper employer purpose and in reasonable manner, and probably to clearly illegal, we get the following distribution:

Probably Illegal	Legal If For Proper Employer Purpose and Done in Reasonable Manner	Clearly Legal
. Listening to or recording speech in "private places" at work; . TV-monitoring of "private places" at work; . Computer auditing to detect dissenters; . Monitoring mental states by machine; . Wiring up entire employer premises for listening or photographing when "needed."	. Monitoring of telephone performance by customer-service operators; . Monitoring employee personal calls; . Sound monitoring of employee speech at work sites; . Use of automated location devices for personnel or investigative purposes; . Computer auditing of telephone numbers to detect abuse of telephone rules; . Computerized brain-wave analysis for substance abuse testing; . Random search of end-users PC disks or files; . Audit of end-user transactions to mainframe or other terminals	.VDT work monitoring; .Closed-circuit TV monitoring of work places

Before discussing why these judgments about legality have been made, and the support for these conclusions, a word may be useful about the relation between current law and ethical/social values. We start with the assumption that constitutional, statutory, regulatory, and common law in the U.S. is generally close to dominant social values and public opinion, rather than being fundamentally or for long at odds with such values and opinions. There may be moments of cultural lag in the law, or periods of transition toward new value formulations. But American law does usually reflect dominant mores and values, and is therefore a fairly democratic (representative) element in the U.S. political system. Thus, the presence of a known or believed disjunction between law and majoritarian moral/ethical values is an exception to be analyzed, rather than a common occurence to assume. We will attempt to illustrate this general harmony of law and values in our analysis of the current legal status of various employee-monitoring techniques.

1. Clearly Legal Measures

The two monitoring activities put in our "clearly legal" category are VDT work measurement of individuals and closed-circuit TV monitoring of workplaces. We are aware of no statute, judicial ruling, or regulatory-agency rule forbidding such activities. In addition, we are aware of no legal rule that sets conditions on how employers may carry out these two activities. While one could imagine some outrageous application by a hypothetical and malevolent employer that might draw a court or agency into defining such a rule-of-reason, no actual employer conduct that we know of has ever taken place and been tested.

Why is such activity clearly legal? We believe the explanation lies in the combination of five factors: the "public" (meaning exposed and open to general view) nature of the employee's activity; the lack of any First

Amendment (speech, press, association, religion) element to work actions; the absence of interpersonal communication in work processes being captured; the employer's socially-accepted need for measuring and promoting efficient and quality work; and the nature of the premises as private, employer property. In short, the employee activity being monitored is not something to which American values attach a "reasonable expectation of privacy."

Equally important is the nature of the monitoring techniques. Collecting data on employee keystrokes or telephone calls by software, or using a TV camera to do what has traditionally been done by the human eye of supervisors (open or hidden) does not seem to most Americans, and to American policy-makers, as an impermissibly intrusive method, as applied by employers today. Though some privacy advocates and the media can invoke spectres of "Big Brother technology" in such techniques, neither American law nor dominant opinion sees the actual uses being made of these techniques by employers as improper.

How American workers view individual work monitoring deserves some additional discussion. Unlike most European workers, where anti-boss and group-solidarity traditions permeate workplaces, most American workers begin with individualistic values and accept individual performance evaluations if these are fair in goals and methods. In a study of 110 private and public organizations using office automation (90% non-union and 10% unionized), Westin and his colleagues found that the overwhelming majority of workers using VDTs whose employers did individual work monitoring felt there were more advantages than disadvantages to them in this activity. They wanted to be judged for what they did, not the group, and to be rewarded concretely (by bonuses, incentive pay, higher performance appraisals and promotional opportunities, etc.) if they excelled. They also viewed individual data as "more objective" and "impartial" than the supervisory subjective evaluations that many experienced before machine-generated statistics were available. While a minority of VDT end-users that Westin interviewed were concerned or angry about VDT work monitoring, their reasons centered on unfair work levels required (especially with system downtime or customer-needs not properly factored in) or secretive, non-communicated statistics being used in their judgment.

This is not to say that experiments with group-based performance standards, as the CWA and Mountain Bell have done, may not be a promising employee-relations technique, and an important step in better employee participation. But we believe that this is essentially aimed at correcting a high stress, lowered-quality work rule that the Bell System felt itself forced to institute as new competition, deregulation, and changed consumer interests in telephone service pressed in on AT&T in the 1970's. It -- and similar experiments in changing performance-evaluation and work standards administration -- do not arise from any widespread privacy-based claim by American workers that employer monitoring of individual work production is, per se, unacceptable as intrusion.

2. Probably Illegal

Five examples of workplace monitoring appear in our charts as "probably" to "clearly" illegal, under current American legal doctrines. Listening to or photographing employees in "private places" at the worksite would be "probably illegal," because a growing stream of case decisions (and a few statutes, such as the Connecticut law discussed earlier) have assigned a legally-recognized "privacy" status to rest rooms, telephones provided for personal employee calls, employee lounges, and lockers for which the employer allows employees to bring in and use personal locks. However, this reasonable expectation of privacy for such locations does not give total immunity from employer monitoring. Rather, the nature of these places requires the employer to bear the burden of proving that a substantial employer interest and concrete situation (detection of dope sales in the rest room) is present; courts would also look closely to see whether other investigative techniques less invasive of the "private place" were not possible. These might involve using undercover agents; detecting people leaving a rest room and going back to the work site; etc.*

Computer auditing to detect dissenters -- such as checking telephone call records to find out who called an inspector general, a Congressional office, the media, or a public interest group -- would be quite likely to be held illegal, at least if done by government. If a federal employee were involved, for example, this could be under the Civil Service Reform Act of 1978, in its whistle-blower protections; under anti-reprisal clauses of various substantive employee-protection or public-protection laws (EEO, OSHA, ERISA, EPA, etc.); or even be seen by a court as an unacceptable executive-agency interference with First Amendment rights of federal employees.

The last two examples are hypothetical ones, included to help clarify the social values and legal processes involved. If an employer were to insist that all employees wear electronic headbands that obtained brain waveform readings indicating qualities such as alertness, attention, concentration, "positive attitudes," or similar mental states, it seems clear that no justification of employer personnel administration, work-quality-assurance, or inhibiting crime would outweigh the unacceptable intrusiveness of such actions. One key element would be the penetration into the internal consciousness and mood state of the individual, reaching passive aspects of the person rather than observing active (chosen) conduct. Another unacceptable aspect would be the continuousness of such monitoring.

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* Thus, even these two activities might be put in the "Legal If..." column of our chart, as depending on circumstances and application. However, what we see as the heavier burden on the employer to justify monitoring of "private places" is the reason we put it in "probably illegal" column.

Wiring up an entire employer premise for sound and/or sight surveillance would also seem to be illegal under current American law. This would be the equivalent of an overbroad "search" under Fourth Amendment concepts, lacking the limits as to specific unlawful/improper activity being investigated and the area-contained search required by American "reasonable search and seizure" doctrines. Courts could be expected to label this the technological equivalent of the writs of assistance or general warrants that the American colonists rebelled against, and which James Otis cited as the animating reason for the Fourth Amendment.

3. Legal If...

It has been a fundamental aspect of American law that the legality of much public and private action will depend on (a) the importance of the social interest asserted as justification for an action affecting civil liberties interests and (b) the reasonableness and due-process-satisfying elements of the specific technique or procedure adopted. This has been a central aspect of privacy-law development, especially as new technological systems or devices are applied by public organizations (limited first by constitutional standards and then statutory law) and by private organizations (primarily limited by statutory and common law standards).

In our chart, we have placed eight examples of monitoring activities in our "Legal If..." category. That is because we see these as employer actions that will, at the outset, be treated under current American law as within employer authority if an important and legitimate employer interest is presented and if the monitoring is carried out in a limited and safeguarded manner.

In doing its balancing of employer and employee interests, we believe courts will use the key elements that we presented in Table 1, on page 7. (We present that Table again, on the following page, for easy reference in this section.)

Table 1. Five Elements in the Socio-Legal Analysis of Surveillance Issues

ELEMENT	INTERESTS	STANDARD
1. The place where monitoring occurs	The property interest of the owner; the "home is your castle" interest of the individual and family;" etc.	Whether the place is one society affords a reasonable expectation of privacy
2. The person and activity being observed	Public official or private citizen; special occupation deserving confidentiality treatment (doctor, religious advisor, etc.); etc.	Whether the individual is someone entitled to greater or lesser privacy protection than the "ordinary" citizen
3. The technique of observation being applied	A. Freedom from "constant," "total," or "unfair" surveillance; B. Requirement that technique be accurate and results not subject to manipulation	A. Whether this is unreasonably intrusive surveillance, or inconsistent with basic human dignity. B. Whether the technique meets due process standards
4. The use to which put	Privacy interest of subject versus social or institutional need for surveillance	Whether the social need outweighs the reasonable expectation of privacy ("balancing tests")
5. The safeguards applied	Holding intrusion on individuals to the narrowest scope needed and with meaningful safeguards to control or disclose abuses.	Whether the surveillance system is properly bounded and limited, as a constitutional democracy requires.

We can look at two of the listed monitoring activities which we termed "Legal If..." to illustrate how balancing elements are likely to be used in considering legal challenges to employer conduct.

a. Monitoring Calls of Customer Service Operators

In earlier sections, we traced the evolution of American law on employers listening-in to customer calls handled by their telephone operators. We showed how this was treated between 1890-1960 as an unquestioned and unlimited employer prerogative. Then, it was authorized as a specific exception to federal and state anti-wiretapping statutes in the 1960's and 1970's, but with some limitations written in as to employer use for service-quality purposes, notice to the employee, and technique of observation. Then we noted that some state public utility commissions and some state statutes over the past decade have spelled out the safeguards even further, requiring notice to the public that certain numbers are subject to monitoring. We also showed that federal agencies have adopted printed notices of service observing on forms sent to the public, as with IRS forms.

A 1983 case brought under Title III of the Omnibus Crime Control and Safe Streets Act (18 U.S.C. Sec. 2510) illustrates how employee privacy is protected under this law, not just the privacy of the third-party customer. A supervisor at the L.M. Berry Company was listening in to an employee's telephone call under a known and standard performance observing procedure, using an extension-phone. The supervisor heard this woman employee discussing a new job she was considering, and which she shortly afterwards took, leaving the Berry Company employ. The supervisor had words with the employee about her leaving, during which the fact became known to the employee that her supervisor had listened in to her earlier telephone call. The employee sued under Title III, and the U.S. Court of Appeals held that her reasonable expectation of privacy under the statute had been violated. While supervisory monitoring was authorized under Title III, the court explained, this was allowed only for checking the quality and rule-compliance of the employee's work. As soon as the supervisor heard a conversation that related to the employee's "personal affairs," the court said, the supervisor was required to hang up, and the continued listening in to her "private conversation" violated Title III.

This clear distinction between business and personal calls is recognized by the practice of some employers in providing separate telephones, usually pay phones, which customer service operators are to use for making personal calls. The employers indicate that no listening in is done on those phones.

Looking at the five elements used in the balancing process, we can see that the federal court, using the legislative policy set by Congress in the 1968 wiretapping act, disregarded the fact that this was the employer's telephone system, on the employer's property; that the call was being made on company time (during business hours); and that the supervisor was following legal procedure in starting the listening-in. What was critical for the court was that service observing not be allowed to slip over (or serve as a pretext for) listening in on the content of calls of a non-job-related nature between employees and third parties. The fact that the content related to the employee's future employment plans at this company (rather than purely social matters) did not give the employer's agent any basis for continued listening. One can speculate that the federal court saw a refusal to find this a violation of Title III as a judicial action that would open the door to widespread possible abuse by employers of the limited listening-in power that Congress authorized in Title III. An employer's interest in learning about future employment plans of employees was clearly not regarded as a socially-justified reason for allowing the employee's telephone privacy to be invaded.

b. Computerized brain-wave analysis for determining substance-abuse

A new scientific technique for detecting alcohol and drug abuse has been patented and is now being introduced for use in hospitals, drug-treatment programs, law enforcement, and employment programs. Because it represents a computer-based program that employers could use to screen employees on their premises and make important personnel decisions, we have included this as an example of emerging monitoring techniques that help illuminate the legal and social policy analysis of future worker monitoring techniques.

Traditionally, alcohol and drug testing has relied on laboratory tests making chemical analysis of urine, breath, or blood specimens. Typically, in the employment context, this requires taking the sample from an employee under controlled conditions of production or extraction; sending the specimen to a laboratory; performing chemical tests on the specimen (often a second "corroborating" test if a first test is "positive"); and then forwarding the test results to the employer.

Legal reviews of employee substance-abuse testing have produced some fairly clear standards when test results are relied on to justify adverse actions against an employee:

- The scientific test must meet judicial standards as to accuracy, validity, and objectivity of test results;
- The level of "intrusion" into the body or person of the employee must be considered acceptable; and

- The entire procedure must meet due-process standards, such as proper advance notice of testing to employees affected; accurate labeling and secure handling of the specimen by the laboratory; opportunity for the employee to challenge the test results; etc.

Beyond these standards lie several broader questions about the legal permissibility of an employer's substance-abuse testing on which American law is not yet clear, and about which major debates are under way:

- Is there a justification (socially-accepted need) for an employer mandating periodic or random substance-abuse testing for its work force or should testing be limited to specific instances in which employee conduct indicates the presence of substance abuse and/or its effects?
- Must an employer limit random or periodic screening to employees in work that poses special problems if there is substance abuse (fork-lift operators, nuclear plant workers, school bus drivers, etc.) or can an employer do random testing of all employees? If only some employees are tested, does this create any equal protection issues if those tested are disproportionately racial minorities or blue collar workers? What should the law do if employees allege that random screening is being used to stifle whistle-blowing, dissidents, or pro-union activities?

It is in this environment of some fairly clear legal standards and many larger unresolved legal questions that a computerized test has been introduced that measures brain waveform patterns to detect the "active presence" of proscribed substances in an employee. How this new device, called the

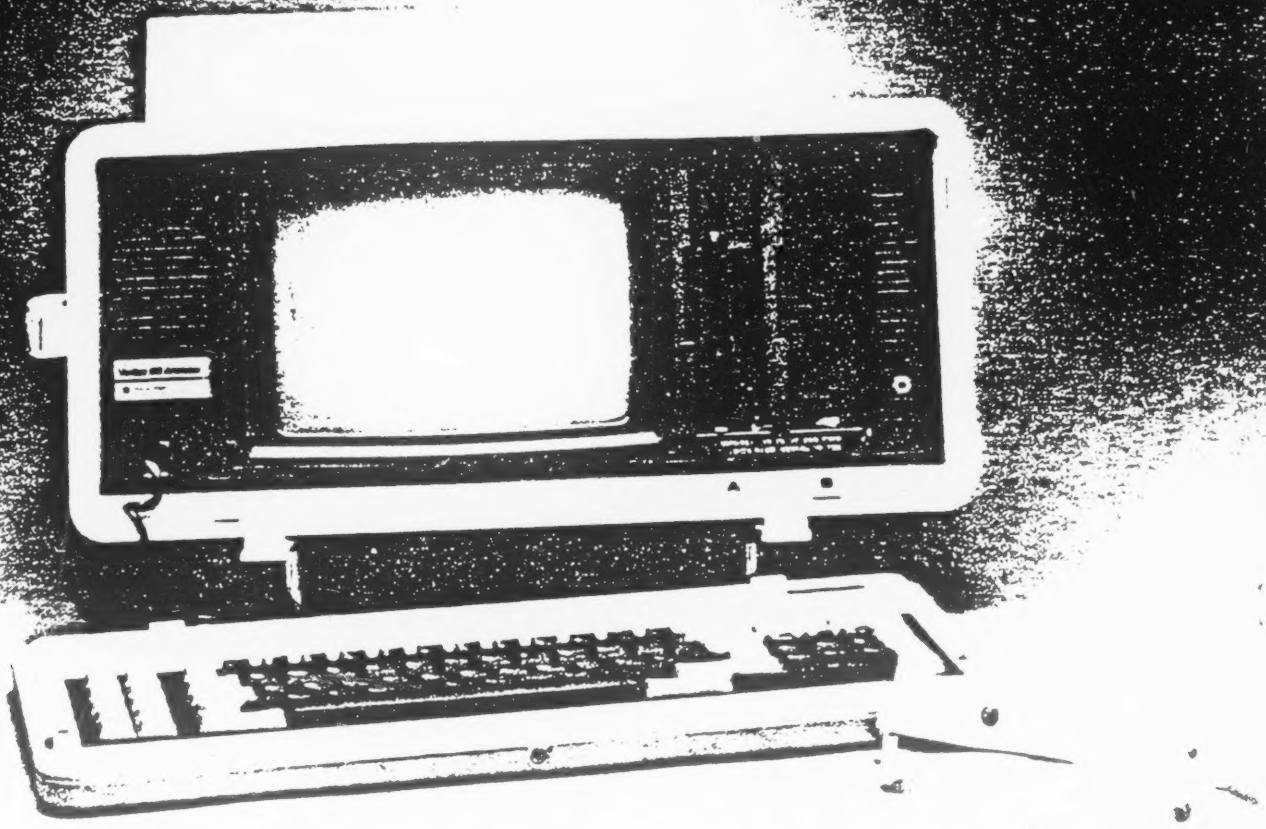
Veritas 100 Analyzer, operates was summarized recently in Law Enforcement Technology (February/March, 1986, p. 56):

> The Analyzer detects the presence of marijuana, alcohol, and cocaine in a subject by measuring the corneal-retinal potential transmitted along the vestibular nerve and provides on the spot results. The system has been trained to recognize the characteristic brain waves that this nerve grouping will produce when the subject is under the effect of a particular substance. This signal is unique, and each drug produces a "fingerprint" on the signal that the Analyzer identifies.
>
> The Analyzer consists of three components: a disposable headhand, a microprocessor, and expert systems software. The procedure begins with a headband being placed around the subject's head. Once this is completed, the subject performs a single calibration test that lasts 15 seconds. This is followed by a series of four tests that last approximately 40 seconds in length. When this is completed, the subject is no longer needed in the testing area.
>
> The Analyzer will then provide an operator with the subject's test results on a screen. The results are presented in an easy to read graph that states whether alcohol, marijuana, or cocaine are present, not present, or suspected at that time. The Analyzer will also present multiple drug findings if they are active in the subject at the time of the test. The company plans to expand the drug menu to include hallucinogens, opiates, tranquilizers, amphetamines, and barbiturates over the course of 1986. The instrument will detect the active presence of the drug only at the time of testing. It does not provide concentration levels but rather whether or not the subject is affected by the alcohol or drug. It is, therefore, subject specific and considered to be relevant to the subject in question only at that time.
>
> In addition to the information on the screen, a hard copy printout is provided simultaneously with the pertinent subject information such as name, address, time of arrest, driver's license number, and arresting agency. The Analyzer will also store the subject's waveforms and results for future use, should it be required.

On the following two pages, we reproduce a brochure about the Veritas 100 Analyzer that provides useful details about the equipment and techniques used at this test administeration.

The Veritas™ 100 Analyzer.

The true test for substance abuse.



The Veritas™ 100 Analyzer: The Drug and Alcohol Detection System

1. Detects the presence of both Drugs *and* Alcohol in *one* test
2. "Fingerprint"-like waveforms for each drug show presence of drugs or alcohol
3. Provides tangible proof of presence of abused substances
4. Eliminates drawing of body fluid samples—one test shows it all

Small Space, Low Cost, High Yield:

1. About the size of a typewriter
2. Unit is transportable, weighing only 35 pounds
3. Immediate results at a fraction of the cost of other testing methods
4. Single operator testing means minimal manpower required

NATIONAL PATENT
ANALYTICAL SYSTEMS, INC.
A SUBSIDIARY OF NATIONAL PATENT DEVELOPMENT CORPORATION

Non-Invasive Method:

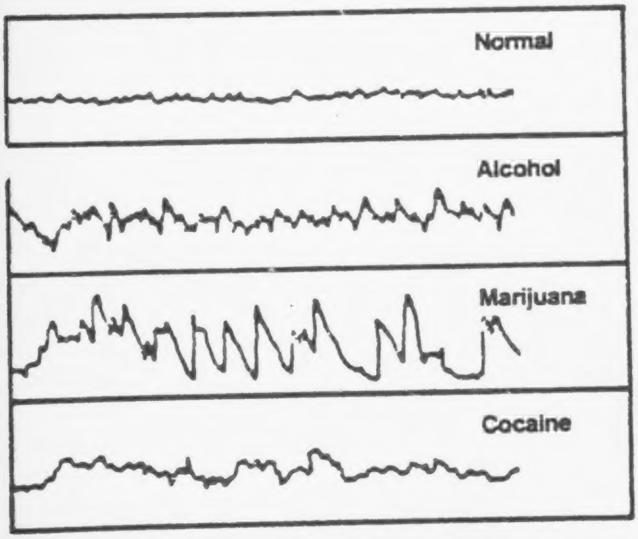
1. No needles or fluids used–reads brain waves for indication
2. Disposable headband insures a reliable test every time
3. Eliminates costly lab fees
4. Minimizes chance of technician error

Fast Accurate Results:

1. Average testing time about five minutes
2. High degree of accuracy
3. Data storage capability maintains all test information and results for future use
4. Data copy feature provides printed readout of conclusions
5. Quick results mean quick decisions

The Veritas™ 100 Analyzer Performs The Work, Minimizing Operator Error:

1. No extensive training needed
2. Automatically compares subject's brain waves with known drug waveforms
3. Determines presence of substance exclusively at the time of testing
4. Complete training and service support from National Patent Analytical Systems



This is a revolutionary method of drug and alcohol detection. Now you no longer have to rely on fluids from every subject when the Veritas™ 100 Analyzer can simply, non-invasively collect a sample brain wave through an easy-to-use, disposable headband.

Years of scientific research* prove that drugs and alcohol leave a characteristic "fingerprint" on brain waves. The Veritas™ 100 Analyzer is capable of identifying these characteristics by means of an expert computer system developed to assure the highest statistical reliability.

At National Patent Analytical Systems, Inc. we realize that ours is an ever-changing society where new drugs and substances of abuse become available and used. We plan to continually upgrade our system to keep the Veritas™ 100 Analyzer a product ready to service today's needs.

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EXPRESSWAY PLAZA TWO, ROSLYN HEIGHTS, NY 11577 (516) 484-3090

*Data on File

On the first encounter, this technique can evoke Orwellian images from observers. It can be perceived as "probing the mind," "hooking employees up to a computer probe of the unconscious," and "using high tech to intrude into mental processes." The physical connection of an employee to the microcomputer apparatus resembles the polygraph or "lie detector" setting, as does the production of graph-type waves on a screen or in hard copy.

However, our judgment is that an employer who meets the primary legal standards for engaging in substance-abuse testing (need, proper employee population, frequency of testing, etc.) would be upheld in utilizing the Veritas 100 technique. We foresee the courts responding to this new technique as follows:

- Accuracy and scientific validity: courts will examine the manufacturer's independently-conducted laboratory and field tests and, if the findings of less than 1% false positives are corroborated, and if the non-dependence of the test results on subjective operator readings is also corroborated, the Veritas technique will be held to satisfy this requirement.
- Intrusiveness: courts will take note that no penetration of the body is needed to obtain the test-specimen, nor is there any dignity-impairing production of the specimen (as in urination under supervisory watching). No thought processes or substantive information are obtained by the employer.
- Relation to Off-the-job privacy interests: Since the technique measures only present impairment of functions as a result of a substance then present in the employee's system, Veritas is basically testing current fitness for work duties, an interest of the employer that

commands strong social approval. The test does not capture lingering traces of substances that may have been consumed days or even weeks earlier, during the employee's off-the-job, private life.

- Due process: because the Veritas test is administered on the employer's premises, by its agents, produces a result in minutes, and preserves the test result permanently (with exact identification) for future inspection, retest, or challenge, this procedure avoids the many "chain of custody" problems that arise in the shipment of multiple specimens to labs and the extensive handling and testing-procedure problems. It would thus meet due process requirements.

In short, as a new computer-based technique for testing the current impairment of an employee by substance-abuse, and assuming that an employer satisfied legal requirements as to the need for and scope of its overall testing program, the Veritas test can be expected to be approved by courts under current American law.

c. "Human Bugs" -- The Link Between Privacy and Due Process

Generally, an employer, public or private, may bring undercover agents onto its property, posing as fellow employees or supervisors, and have such agents conduct investigations for any legitimate employer purpose: efficiency, security, detection of crime. Such agents have been called "human bugs," as the pre-technological version of hidden microphones. Such undercover agents cannot be used legally to spy on those on-premise union activities protected by state and federal labor laws, nor to detect and then take reprisals against employees for reporting employer violations of law.

It is instructive in depicting the current American legal approach to note that, even when such undercover agents are conducting lawful monitoring or surveillance, some state statutes have been enacted to insure that an employer using such techniques provides due process hearings not otherwise available to the non-governmental and non-union employee. A good example is what are known as the "Spotter Fair Hearing Laws," found in states such as California and Nevada. The Nevada law provides:

> Section 613.160 Spotters: Right of employee to be confronted with accuser; penalty.
>
> 1. It shall be unlawful for any person, firm, association or corporation, or agent, superintedent or manager thereof, employing any special agent, detective or person commonly known as a spotter for the purpose of investigating, obtaining and reporting to the employer, his agent, superintendent or manager information concerning his employees, to discipline or discharge any employee in his service, where such act of discipline or the discharge is based upon a report by such special agent, detective or spotter, which report involves a question of integrity, honesty or a breach of rules of the employer, unless such employer, his agent, superintendent or manager shall give notice and accord a hearing to the employee thus accused, when requested by the employee, at which hearing the accused employee shall have the opportunity to be confronted with the person making such report and shall have the right to furnish testimony in his defense.

Nevada provides for a suit to be brought by public authority, and for a penalty of $500 for each offense to committed.

ARE NEW LEGAL STANDARDS ON MONITORING LIKELY?

Our discussion thus far has taken current American law as its context. Obviously, public policy-makers can enact new statutes, promulgate new executive and regulatory orders, and develop new judicial concepts that would increase employee privacy-protection doctrines in employer-monitoring activities. Is such new legal action likely in the near future?

We believe new state or federal statutes are unlikely. Apart from the generally conservative direction of present public opinion, we believe that no significant case of present or likely employer abuse of the examples of current monitoring listed in our Table has been made out by critics or interest groups, or is likely to be made persuasively in the near future. As we have noted, efforts to convince state legislators to enact a ban on VDT work monitoring have all failed, even in states like Massachusetts, Michigan, and California that are known for their enactment of strong employee-protection and privacy-protection laws. The absence of any documented stream of improprieties or misconduct in the use thus far of employee-location technologies, CCTV monitoring, telephone-abuse auditing, or surveillance of terminal user transactions to central data bases make enactment of new statutes in those areas also unlikely. Only in the area of employer drug testing -- which is really not central to OTA's project and which we treated only for clarification of legal and social policy analysis -- has there been and do we think there will be important legislative action defining privacy rights and setting standards for employer use of monitoring techniques.

There may well be some new executive-agency rules or judicial decisions governing at least the public sector's use of some of the monitoring techniques discussed in this report. Our case study of how a set of guidelines developed for conducting the telephone-abuse-audit in the federal establishment shows this process at work, and what finally emerges after the pilot test is completed is likely to be adopted also by state and local governments engaging in such activity. We expect substantial Congressional review after completion of the pilot test, and there could be committee recommendations demanding more protective procedures to see that dissident or whistle-blower federal employees are not being punished by these audits. Federal-court challenges by federal employees citing the Privacy Act or the Civil Service Reform Act may also produce additional "rules of reason" under which telephone-abuse audits would have to be conducted. Other existing federal and state employee privacy laws or communication privacy laws (such as Title III of the Omnibus Crime Control Act or recent Computer Crime statutes) may also be applied by courts to specific employer monitoring activities.

VDT MONITORING: PROSPECTS FOR 1987-1988

During the second half of 1986, a steady stream of articles and conferences attacking "Big Brother monitoring" through VDT systems were sponsored by leading unions and activist groups concerned with VDT issues. We reproduce a selection of these materials in the Appendix to this report (Item 4). Largely as a result of efforts by these groups, with support from the ACLU, the issue of VDT monitoring was given feature treatment in some of the mass media in this period. (Examples appear in the Appendix, Item 5.) A number of business groups, such as the Computer Business Equipment Manufacturers' Association, replied to critics with a defense of employer use of performance measurement and a presentation of guidelines for "responsible" use of monitoring systems. (Appendix, Item 6.)

It seems likely that the "anti-monitoring coalition" will seek to air their concern over "oppressive" and "sweatshop" monitoring in both Congressional and state legislative hearings in 1987-88. The issue has appeal for many legislators because it combines the "privacy invasion" and "employer abuse of power" themes in a dramatic way, and real employees can testify about adverse "stress and mental health" effects that they have experienced from abusive monitoring. Advocates will argue that only regulation will protect most office workers from such harmful effects, since most VDT operators are either non-union or working in industries where unions have been unable to control abusive monitoring through collective bargaining.

Employer and vendor groups can be expected to oppose strongly any legislative intervention. They will argue that there is no credible empirical data to support the argument that "oppressive" and "sweatshop" monitoring is widespread today in American business or government, or that it is increasing as the technology moves deeper into office and customer service work. They will also argue that the great diversity of job settings, work organization, and work processes make it extremely difficult to write any "code" that will fit all or even most work performance monitoring. Finally, they will warn legislators that a vital aspect of sound business management would be jeopardized if only group and not individual performance measurement could be used by employers.

The prospects for 1987-88, therefore, are for continued debate over the nature, scope, and effects of VDT-worker monitoring, focused in legislative hearings but broadly echoed in the media, in collective bargaining negotiations, and in union organizing efforts directed at office workers in highly performance-oriented industries. While legislation from Congress or at the state level does not seem likely, in this observer's judgment, the "anti-monitoring campaign" could well produce a set of recommended guidelines expressing a consensus of good practice. Such a consensus might approximate policies already treated in this report: the terms of the SEIU-Equitable contract in Syracuse, New York; the IBM guidelines; the CBEMA recommendations; parts of the recent 9to5 recommendations[79]; and the "Fair Performance Measurement" principles presented in our analysis.

A CAUTIONARY SUGGESTION TO OTA: ADHERE TO THE "PRIVACY AND SECURITY" DIMENSIONS OF NEW COMMUNICATION TECHNOLOGIES

As we were asked to do by the OTA staff, we have taken up in this report a very broad set of empirical, legal, and social-policy issues relating to current and potential employer monitoring of employee activities. We even titled this report "Privacy and Quality of Work Life Issues in Employee Monitoring," to reflect this broad scope. However, in the course of our analysis, we have noted that this OTA study could, if allowed, be carried into many other social issues besides privacy, and OTA could address a wide circle of social-policy considerations at the workplace. In concluding this Task 1 report, we believe it is useful to suggest that OTA will make its best and most responsible contribution if, in its report, it closes in on the privacy aspects of worker monitoring, and only mentiones lightly the employee and labor relations, personnel practices, and physical and mental health considerations also presented by monitoring activities. Those are extremely important social concerns, and are currently of significant group and public interest. But, as we understand the OTA mission assigned in this project, detailed treatment of those issues would represent a diversion into "extraneous" matters. And, any folding of them into an "expanded" privacy analysis would, we believe, extend the already hazy value-concept of privacy well beyond its intellectually-supportable or politically-viable boundaries. To pile too much on the privacy construct is to risk its collapse as a restraint on organizational action that American society is ready to support.

A much sounder strategy, we submit, is to focus on the five elements of a privacy-and-surveillance analysis that we have noted in this report, and to apply the kind of socio-legal balancing that we have done for the main types of present or foreseeable employer monitoring activities. This is not to say that OTA will necessarily agree with our estimate of past or current employer practices, the likely applications of current privacy law standards, etc. But, we believe OTA will be fulfilling its project assignment best if it adheres to a privacy-based analysis, and resists any temptations, however seductive, to carry its discussions beyond that boundary.

APPENDIX

Item 1:

Excerpts from Alan Westin, Privacy Issues in the Monitoring of Employee Work on VDT's in the Office Environment: Practices, Interests, and Policy Choices, a Contractor Report to OTA, December, 1984.

(These excerpts cover trends between 1880 and 1980. For a general historical analysis of the physical tools for monitoring employees and then use by business and government authorities, see Westin, Privacy and Freedom.[1])

IV. THE PRE-OA BASELINE, 1945-1970

A. Introduction

In the period between the 1880s and 1945, in both factories and offices, craft-based production and employee discretion in performing jobs were replaced by machine-assisted work and scientific management approaches. These brought increased division of labor, specialization of tasks, and organization of work around efficient utilization of mechanical (and then electrical) machines. Under the influence of Frederick Taylor and his counterparts in industry, time-method-and-motion studies were applied to identify and then enforce an efficiency-based, "one best way" to perform those tasks for which the applications of new industrial and office machines had produced routine, repetitive, and simplified work operations. The story of how this became the dominant philosophy in factories, and how the same ideas were applied by Leffingwell and his disciples to routine clerical functions in office work, has been well and often told, from a variety of ideological perspectives.[2]

The twin pillars of "scientific management" were observation and measurement. Time and motion engineers, armed with stop watch, chart diagrams, and clipboards, moved through shops floors and office buildings in the early 20th century, applying their techniques not only when major new technologies were introduced but also on a continuing basis, as changes in business or government services, improvements in machines, and changes in physical work environments called for new studies of "the best way" to do each task. This process put workers under physical observation; it also required measuring worker output — number of widgets produced, lines typed, letters sorted, orders entered by telephone, claims processed, etc. This was done first to set a "work standard," and to keep revising it for maximum output; then, to record each employee's daily or weekly output, to see if the standard had been met or exceeded, or whether the employee had failed to "make standard."

While "scientific management" was the dominant approach in both industry and offices from the early 20th century through our baseline period, one important difference among industries and government sectors was in whether such work standards and output measurements were used as the basis for incentive payment systems (a "base" wage plus "bonuses" for exceeding "standard"), or only to identify poor performance of individual employees, leading to additional training, warnings, or discharge if work continued to fall "below standard." In industries where stimulating individual effort was seen by managements as having a significant effect on production rates, as in clothing and steel, incentive pay systems were widely used. In other industries, where continuous process production or assembly lines limited the ability of individuals to affect the pace of producing, as in chemicals or autos, incentive pay plans were used less often. About 25% of manufacturing employees were estimated to have been covered by incentive pay plans in the United States in the 1945-1970 period.[3] We do not know of similar authoritative figures for office clerical work, but it has been shown to have been applied in typing, filing, and machine-operating departments.[4]

The position of labor unions toward the form of scientific management expressed by "Taylorism" was one of uniform opposition.[5] The "stop watch man" was the living symbol to unions of unfair "speed ups" of work pace, lowering of wages for jobs so measured, creation of routine and "mindless" assembly-line work, and the tightening of authoritarian "management control" over workplaces. Because new technology was applied by management to simplify work, and because unions saw this as reducing the "craft" element that gave skilled workers their bargaining power, applications of new technology were often attacked or resisted by unions as "dehumanizing" the workplace.[6] However, there was considerable variation among unions in different industries in their approval or disapproval of new technologies, depending largely on the impact on job levels and industry growth.[7] The overall position of American trade unions toward new technology in our baseline period was one of positive acceptance, given the prosperous economy and good employment opportunities of this era, with union efforts focused on safeguarding the interests of existing and future workers in how such technologies were applied.[8]

As to incentive pay plans, some unions, such as the Machinists, have been bitterly opposed to such systems; their position is that pay should be for satisfactory achievement by the work group or unit, with the individual employee's pay per hour set under collective bargaining agreement by specific job classification. Other unions, such as the Steelworkers and Electrical Workers, have supported incentive pay plans, because the workers they represent like the system offered by management and it was being fairly administered.[9]

Although unions are able, under American labor law, to bargain with managements about many aspects of work, wages, health and safety in work operations, discipline, and discharge, there is usually a "management's right to manage" clause that reserves to the employer the right to determine the "method and means by which its operations will be carried out."[10] Unions may attempt to win limits on or specifications about work monitoring practices through negotiations, but managements can refuse to agree to those, citing the "management rights" clause, and this has generally been upheld by arbitrators. (See sections C and D in this Part.)

B. Office Work and Monitoring Practices

In the 1945-1970 period, measurement of output for quantity and quality was commonplace for many office clerical jobs. In terms of quantity, keypunch operators and data entry workers using VDTs in the 1960s were measured by keystrokes. Typists in typing pools were measured by lines, pages, or documents completed. Accounting and inventory clerks and claims processors were measured by units completed in a day or week. Generally, this measurement was achieved by supervisors counting products produced, or verifying production reports filled out by the employee. For such jobs, quality checks were made of errors committed, and if these went above the allowable number for a given task, there could be warnings or discipline, or loss of "bonus" pay if an incentive pay system was in place.

As far as watching how these clerical employees worked at their jobs, observation by supervisors was the common technique. The academic literature on office work in insurance companies, banks, and other "clerk intensive" businesses contains many critical descriptions of "close surveillance" by supervisors — "always watching" accounting clerks, pool typists, tellers, etc. and aggressively monitoring their compliance with work procedures and output quotas."[11] However, we have no estimates of how many workplaces had supervisor monitoring that was offensive to employees in this period and how many had practices that were considered fair and acceptable. Presumably, the low levels of unionization among clerical workers and the absence of public protests or calls for legislation are some indication that visual supervisory monitoring was not regarded by most office workers as an intolerable practice.

The critical aspects of individual monitoring of highly-routinized clerical jobs in the pre-OA era was that direct, visual supervision was necessarily occasional (supervisors couldn't be everywhere at once and TV monitoring was not used in offices); also, except for situations where mechanical machines or EDP-data entry systems recorded employee output automatically, record-keeping was not a total and continuous process for clerical workers.

Telephone work, both for the telephone companies and in the customer-service operations of business and government organizations, fell into a different category. Since the early days of the telephone companies, and at least since the 1930s for business and government organizations, the performance of telephone operators had been subject to what was called "service monitoring."* This consisted of regular sampling by supervisors of telephone conversations between individual employee operators and members of the public seeking service from the organization. All of the telephone companies operating in this period acknowledged using service monitoring. Business and government use was widespread; an AT&T spokesman estimated (in 1974) that about 4,000 to 4,500 business and government customers were renting service monitoring equipment from Bell telephone companies to monitor the performance of their telephone operations.[12] Looking over lists of such customers produced in hearings before regulatory commissions and legislative hearings in the 1960s and early 70s, the major business and non-profit users included:[13]

Airlines
Utilities
Hotels
Newspapers and large magazines
Retailers/department stores
Credit bureaus
Hospitals
Banks
Insurance firms
Collection agencies
Charitable groups
Religious bodies

Among major government users were federal agencies such as the Internal Revenue Service; Veterans Administration, Social Security Agency, General Services Agency, Marine Corps, and federal Job Information Centers. Many state, county, and city agencies with high-volume telephone operations were also users of service monitoring.

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* The telephone companies have used "service observing" to refer to random mechanical checks on the quality of transmissions, connections, and response times of the equipment itself, while using "supervisory observing" to refer to a supervisor listening in to customer-service calls to the telephone company to see how well individual telephone employees are performing. In public discussion and legal proceedings, the term "service monitoring" has been the one generally used for the employee or work monitoring, however, and thus we will use "service monitoring" in this report.

The telephone companies stated that their use of such monitoring was under careful and proper rules. "The sole purpose of supervisory observing is to determine what further individual assistance, training, and development, if any, is required /for the individual employee/. It is purely supervisory in nature and is not designed for disciplinary purposes. By charting individual progress, it not only discloses critical areas which require attention but also affords a means of recognizing satisfactory or outstanding performance." Employees were notified that such monitoring was being done, the telephone company noted, and the specific results of monitoring were discussed between supervisor and employee.[14] As far as invasion of the employee's privacy, the telephone company noted that personal calls by employees were never monitored; telephones for making such calls were provided in employee lounges and never monitored. And, since the customer is talking to an operator in these situations, no telephone conversations between members of the public are involved.[15]

As far as the types of service-quality checks that the company used monitoring to examine, the telephone company gave as examples the following evaluative items:[16]

- Did the business office service representative determine the type and color of telephone equipment desired and correctly establish the time and place of installation?
- Did the directory assistance operator provide the desired number promptly, accurately and courteously?
- Did the plant repair clerk obtain sufficient information about the service trouble, so that proper testing could be carried out and an access time negotiated in the event it became necessary for a repairman to visit the customer's premises?
- Did the long distance operator handle the person-to-person call properly?

Rental by the telephone companies of various kinds of key equipment, and special switchboards to organizations for monitoring their own telephone operators was done in this period under a set of explicit rules, agreed to in writing by the customer.[17] These provided that employees of the customer must be informed that their business telephone contacts are subject to observation; that such service is provided "solely for the purpose of determining the need for training or improving the quality of service rendered by employees in the handling of telephone calls to the subscriber of an impersonal business nature;" and that, when used by hotels, motels, and clubs, observing may not be done in conversations between guest rooms.

Representatives from business and government organizations using telephone service monitoring testified before various hearings that they abided fully by the rules set by the telephone companies, and that conducting such observations where the telephone was the key to their operations was a vital part of assuring that their customers received efficient, correct, and courteous service. The position of Pan American World Airways and the sample of a telephone monitoring report that they used will illustrate the business and government descriptions of their purposes and practices.[18]

> Pan Am maintains Quality Assurance programs in all facets of its operations to assure safety and service, convenience, and economy for both the company and its customers. Telephone call observing is part of this quality assurance program, but is confined to our Telephone Sales Departments, or, as commonly known, "Reservations".
>
> The company policy is that each of our employees, whose job function is selling or servicing Pan Am's product by telephone, shall be observed a minimum of two times

per week, and that observations shall, on each occasion consist of a complete telephone call. The purpose of this call observation is defined in our Reservations Manual which outlines the policies governing our reservations offices and I quote, "The primary purpose of the Quality Analysis program is to give supervisory personnel the tool with which to ensure that they and their personnel are performing their functions in the prescribed manner. Properly conducted, the Quality Analysis program will enable the supervisor to pinpoint areas where additional training and/or supervision is required in the day-to-day operation. Its end result should be to raise personnel efficiency to the level where Pan Am will realize greater economies and revenues through the minimization of errors which cause Misunderstandings, Noshows, Norecs, Late Cancellations, Misconnections and Mishandled passengers." No employee of Pan American has ever been terminated, dismissed, or suspended on the basis of a supervisor's observation through the use of telephone call observation.

An average employee assigned to a telephone sales position in the course of a month will handle in excess of 1500 incoming calls, and the average number of observations for that employee during the month is approximately 8 incoming telephone calls, making the number of calls monitored less than 0.005%. The size of the sampling for an entire office provides meaningful information as to what areas of additional training are necessary and whether we are providing adequate reference materials to our employees. The call sampling as related to the individual employee has little or no significance as a disciplinary tool. A copy of the sales quality monitoring form used in our Quality Analysis program is enclosed.

In Pan American the telephone sales personnel are unionized employees. The employees who do the majority of the call observations are in the "Lead Agent" category and also members of the union. The "Lead Agent" by contract definition, cannot discipline other employees. I mention this only to emphasize that monitoring is primarily used to improve the quality of our service, not to entrap employees.

Where call monitoring equipment is installed and used in our reservations offices, it is done so only in compliance with the existing communications regulations governing the use of such equipment.

We have experienced no strong animosity on the part of our employees directed at the practice of monitoring incoming reservations calls. Our employees are aware that monitoring is conducted and the procedures for monitoring are published in the Reservations Manual under the section entitled "Passenger Reservations Proceudres, Reservations Policies".

We feel that the vast majority of our employees recognize the need for Quality Assurance and understand that in a high competitive industry such as ours that failure to provide quality can only result in a deterioration of our markets, with the subsequent necessity of reductions in our work staff. For this reason, we believe our employees accept monitoring as a necessary supervisory tool.

PAN AMERICAN WORLD AIRWAYS, Quality Analysis Program, 1974

SALES QUALITY

$$

POTENTIAL SALES CALL? Yes ☐ No ☐

WAS A RESERVATION MADE? Yes ☐ No ☐

essentials

DID THE AGENT DETERMINE:	Yes	No
WHERE? (Specific City)		
WHEN? (Specific Date/Time)		
WHICH? (Choice of Class)		
HOW MANY?		
DID THE AGENT OFFER TO BOOK?		

sales skills

DID THE AGENT SHOW SALES SKILLS BY OFFERING THE FOLLOWING:

	Yes	No	NA
Continuing/Return Reservation?			
Protective/Tentative Reservation?			
IHC?			
Pan Am Rent-A-Car?			
Tour?			
Special Service Requirements?			
Mail Out Literature?			
Mail Ticket Delivery?			

service skills

DID THE AGENT SHOW PROFESSIONALISM BY

	Yes	No	NA
Giving Friendly Greeting?			
Using Customer's Name?			
Volunteering Information?			
Using Positive Terms?			
Expressing Appreciation for Calling Pan Am?			

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strengths	IN YOUR OPINION, WHAT WERE THE MOST POSITIVE POINTS OF THE CALL? BE SPECIFIC AND LIST AT LEAST TWO POSITIVE POINTS.
suggestions	IN YOUR OPINION, WHAT ITEMS COULD BE IMPROVED? BE SPECIFIC. HOW?

REMARKS

NOTE TO SALES AGENTS:

THIS FORM WILL BE USED BY YOUR LEAD AGENT ONLY AS A TRAINING AID. IT WILL NOT BE USED TO DISCIPLINE ANY EMPLOYEE. AFTER COMPLETION AND REVIEW WITH THE OBSERVING LEAD AGENT, YOU MAY RETAIN IT FOR REFERENCE, DISCUSS IT WITH YOUR MANAGEMENT SUPERVISOR, IF DESIRED, OR, IT MAY BE DISCARDED.

*SALES AGENT*________________________

*OBSERVING LEAD AGENT*________________________

*DATE*________________________

Overall, employer monitoring of telephone service workers was used in this period as an occasional sampling technique, rather than a continuous oversight. It also did not seem to have been used as an instrument for increasing the pace of work in a way that set off employee or union protests. For example, in recent interviews with telephone company operators who were working in such jobs in the 1960s, employees remember company practices in that era as being "quality oriented," with the company's focus genuinely on insuring that good service was given to callers seeking directory assistance, equipment repair, or new telephone installations, or reporting emergencies to the telephone company.[19]

C. Unions, Collective Bargaining and Arbitration

In our baseline period, the overwhelming majority of office and customer-service workers, between 90-95%, were not represented by unions. This meant that most managements were free to apply work monitoring techniques as they wished, subject only to compliance with general laws, such as those relating to monitoring employee telephone calls with the public. (See section D.)

In the industrial sector, a few unions were able to obtain clauses in collective bargaining specifying the way in which new technology-based monitoring would be conducted. In a "memorandum of understanding" negotiated between the Machinists Union and Cutler-Hammer Company, it was specified that a productivity recording device known as "Telecontrol" would not be used as a disciplinary tool, could not be used to establish "production demand" standards, and could not be used to require day workers to work at an incentive pace.[20]

Several unions representing office workers raised anti-monitoring protests in this period, primarily involving telephone service monitoring. In 1967, the Utility Workers complained about Commonwealth Edison Company's shift from an older "double jack" system of supervisors plugging into a clerk's desk to listen to conversations with utility customers to a new telephone-company-provided system that permitted monitoring to be done from a remote location. Employees were told that "random listening-in" was used by the company, for what it said were . . .

"training and overall supervision purposes," but employees would no longer know when their calls were being listened to. The arbitrator held that the use of "undetected monitoring" was not a violation of the existing labor contract, nor did it represent a change in "working conditions" to which the union had to consent.[21]

A similar arbitration decision involved a grievance filed by the Newspaper Guild against the Boston Herald Traveler.[22] The newspaper had used telephone monitoring for its "inside classified solicitors" selling classified ads ever since 1934. This was done with equipment rented from the telephone company that provided a toggle switch at the supervisor's telephone, with which he could listen in on calls being made by each of about 30 classified-ad salespersons. The union maintained that an audible click and a lowering of sound volume let employees know when this monitoring was taking place, though this was not intended to be so by the management.

In 1966, because of a public inquiry in Massachusetts into telephone tapping and recording of conversations, the newspaper suspended its use of service monitoring, to examine whether its use of the practice was legal. (Massachusetts enacted a statute in 1968 governing wiretapping, which specifically excluded monitoring for customer-service-employee supervision from the prohibitions against unlawful wiretapping in its statute.)

In 1968, the newspaper resumed monitoring, but now it installed new console-based telephone company equipment that did not provide the classified ad solicitor (or the customer on the line) with any audible clue that anyone was listening in. All solicitors were notified of the installation of the equipment and told how it would be used.

Management stated in the arbitration proceeding that the monitoring enabled the unit supervisor to observe and train new solicitors, evaluate the performance of experienced solicitors, and learn about the effectiveness of particular "ad sales" being offered, including both the employee's "sell" and the customer's reactions to the offer and the presentation. It noted that such service monitoring had been used for several decades and was widespread in the newspaper industry, was supported by "legal and arbitral authorities," and had not been the subject of "contract restrictions" in the newspaper industry. The Newspaper Guild argued that installation of the new monitoring system improperly changed working conditions set by the contract. However, even if it was held not to offend any specific provision, the union asked the arbitrator to rule "as a matter of equity," that the publisher should either stop monitoring or limit its use to training new employees. The Guild argued, as summarized by the arbitrator, that "the solicitor's inability to tell under the present equipment whether or not she is being monitored has inevitably given rise to feelings of concern, nervousness and insecurity and has made the job of solicitor additionally and unnecessarily burdensome." However, the Guild could not point to any pattern of contract restriction at any other newspapers, or in any other industry using such telephone monitoring.

The arbitrator upheld the newspaper's use of telephone monitoring. The opinion explained:

> The very essence of the work of a solicitor is talking on the telephone. As the employer, the Publisher is, of course, entitled not only to supervise the work of its employees but to adopt reasonable measures which will best effectuate that supervision. In general, such supervision would necessarily entail the training of new and inexperienced employees, observing the day-to-day perform-

> ance of both inexperienced and experienced employees, evaluating their performance and determining ways and means for improving it. In the context of the particular type of work being done by inside solicitors, namely, telephone soliciting, the essence of the performance is a matter of technique — how best to accomplish the selling of the Publisher's product, in this case classified space, under the limitations imposed by the use of a telephone in contrast to a face to face confrontation.
>
> It would seem that, of necessity, the only reasonably effective way in which telephone work can be supervised is by monitoring the calls being received or made by solicitors. It obviously cannot be done merely by visual observation for clearly it is the content of what is said and how it is said that determines the effectivenss of the solicitor's technique and performance. While especially true in training and supervising inexperienced employees and in the case of special promotions, it is no less valid in evaluating the overall daily performance of each solicitor.

The arbitrator noted that telephone service monitoring was specifically exempted from Massachusett's new anti-wiretapping statute, indicating a legislative approval of such employer practices. In addition to exciting the earlier ruling in the Commonwealth Edison case approving exactly the telephone monitoring protested about here, the arbitrator cited a 1966 decision allowing an employer to install closed circuit television for personnel supervision, and quoted approvingly from the opinion in that case:[23]

> The use of television to watch employees concerns the subject of supervision. A decision as to how employees are to be supervised and what are the proper methods of supervision is a normal function of Management. Nothing in the Agreement suggests that this function can be exercised only with the prior consent of the Union. Management has the right to change its methods, procedures and operations without "mutual agreement" — so long as the change does not result in a contract violation.

In closing, the arbitrator stated:

> If there are particular considerations in the circumstances of the instant situation which might suggest some restriction in the way in which the Publisher exercises its right to monitor calls, we do not believe that they are sufficiently compelling to warrant their being imposed by arbitral decision. They are more properly addressed to the bargaining table.

In case of physical observation of workers, rather than telephone monitoring, union protests and arbitration cases in this period involved industrial rather than office sites. The general rule adopted was that employers could — under the management rights doctrine — install closed circuit TV, either for general supervision, to study the performance of incentive workers, or when thefts and inventory shortages made such use important to the employer, as long as this was not expressly limited in the contract.[24] In one case during this period, however, an arbitrator held that the employer had violated a "maintenance of working conditions clause" by installing a closed circuit television system on the production floor, where no specific problems of supervision or operations had arisen to justify such a change in observation techniques.[25]

Another area of controversy in this period involved the special situation of postal workers. The Postal Workers Union protested the continuous use of hidden "lookout galleries" in U.S. Post Offices; these were justified by postal authorities not for work supervision but as a long-standing measure necessary to prevent theft of valuables in the mails. Postal Union complaints were not successful, and the lookout galleries continued to be used.[26] (In Canada, the Canadian postal union won an agreement in their 1964 contract that the post office would not use individual work monitoring for full time employees, but would limit this to trainees.[27] This was not achieved by the Postal Union in the U.S.).

In only one area did arbitration decisions in the industrial sector hold out a promise of useful doctrines for unions in the office sector. Under federal labor law, it was an unfair labor practice to use performance monitoring or observation in a discriminatory way against union members or officers, or employees trying to organize a union; attempts to use such monitoring to justify discipline or discharge of those employees for failing to perform adequately were struck down by arbitrators.[28] Where work monitoring was believed by office-worker unions to have been applied in such a fashion, grievances could be filed and there would be relief in arbitration if the facts supported that contention.

Summing up the situation in our pre-OA period, collective bargaining patterns and arbitration rulings gave managements almost unlimited rights to employ work monitoring as they saw fit. A few office unions tried to negotiate contract limitations or convince arbitrators that management should consult with unions in their monitoring practices, but these were unsuccessful.*

D. The Judicial, Legislative, and Regulatory Setting

There were no constitutional limits placed on either government or private-employer uses of work monitoring in this era, and no common law doctrines gave employees legal recourse against such employer action. Legislative consideration came in one area, telephone monitoring. Because of widespread public concern over wiretapping, Congress and half a dozen state legislatures included in their examination of how to deal with telephone tapping a consideration of whether the random and unrecorded listening in by employers on customer conversations threatened public rights to the privacy in such telephone use. In Title III of the Omnibus Crime Control and Safe Streets Act, and in state anti-wiretapping laws, legislators decided that such employer monitoring was not an unreasonable intrusion, and service monitoring was expressly authorized in all such statutes.[29]

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* In 1967, the Newspaper Guild adopted a collective bargaining demand for "elimination of secret surveillance of employees as well as the use of electronic supervisors, tape recordings, telephone monitoring systems, and similar procedures and devices." Testimony and Exhibits of the Newspaper Guild, U.S. Department of Labor, Workplace Privacy Hearings, December, 1979. This does not seem to have been achieved in any contract negotiated by the Guild.

Two state public utilities — in California and Georgia — responded to anti-monitoring campaigns by the Communication Workers of America by issuing regulations in this period governing how telephone monitoring could be conducted by employers, including the telephone companies.[30] In its 1974 convention, the CWA had reviewed what it considered a long history ("65 years") of "controversial" service monitoring, cited recent abuses of this for disciplinary and termination purposes, and noted the inability of the CWA to do much about this through repeated grievance filings or collective bargaining demands. Therefore, the CWA resolved to strengthen the campaign it had begun in the late 1960s to get public utility commissions to issue regulations on service monitoring; to seek intervention by the U.S. National Wiretapping Commission (then holding hearings on administration of Title III); and also to seek state legislation banning or limiting monitoring.

CWA's first partially successful effort at regulation had come in 1968. Reflecting concern for customer privacy and employee relations, but also finding that service monitoring was important to insure "efficiency" and "quality" in telephone service to the public, the California PUC ruled in 1968 that employers could monitor if (1) one of four techniques of audible tones or notices was adopted; (2) no notations were made of the contents of the telephone conversations; and (3) notations about employee performance were used only for training and quality-control purposes. Over 1,000 employers were using employee service monitoring in California at that time, but the number dropped to 578 by 1974, after the PUC rules were issued.[31] In 1971, after new CWA charges that monitoring was being used by Pacific Telephone to discipline employees, the California PUC added a rule that information on employee performance obtained by supervisors through monitoring could be used for discipline only if the employees involved were given notice of monitoring procedures.

In 1974, Georgia's PUC held hearings in response to CWA complaints. It ruled that employee monitoring could be done only if a visible, bright orange label was placed on the monitored phones of employees and an asterisk was placed in the telephone directory indicated that service monitoring was being done on that line, to inform customers of such conduct.[32]

E. The Social Climate and Public-Opinion Orientations

Though concern about invasions of privacy had begun to rise in the 1960s, with exposure of new technologies for physical, psychological, and record-surveillance and their growing uses by organizations, public opinion surveys showed that only a third of Americans were concerned before 1975 about threats to their personal privacy.[33] In addition, the employment relationship was still treated in public attitudes as one in which employers had very wide and legitimate latitude to set work standards and performance measures as they wished. The only limitations in this period were the rights of workers to join unions and compliance with new equal employment opportunity laws (such as Title VII of the 1964 Civil Rights Act). Individual-employee rights — separate from collective rights for union members or group rights for members of minorities — had not yet moved into public or legal recognition, as they would in the next decade. Some social critics and unions attacked exploitation of clerical workers by employers who paid low wages, set high production quotas, and supervised their employees in "oppressive" ways. Judged by the actions of society in this period — low unionization of such employees, despite union organization efforts; the absence of regulatory or legislative intervention; and non-intervention by the courts under common law or constitutional authority — it seems accurate to say that dominant public opinion between 1945-1975 assumed that most office work was being measured and most individuals were being evaluated in ways that did not call for social interventions against existing employer practices.

V. A TRANSITION PERIOD, 1975-1980: NEW TECHNOLOGY, NEW EMPLOYER PRACTICES, AND NEW SOCIAL VALUES

A. Introduction

The late Seventies was a time of significant change in how work was managed and technologies were applied, along with powerful changes in social attitudes toward individual-employee and women's rights, and toward the use of social interventions to protect such rights. Had OA unfolded in the Eisenhower era, the interaction of technology and society would probably have been tranquil. However, the fact that it was the end of the Seventies and the early Eighties when OA moved significantly into office work helps to explain much about the current controversies over VDT work monitoring.

B. Technological Changes and Employer Practices

By the late 1970s, automatic call distributing systems (ACD) made on-site, silent monitoring of telephone-based office work cheaper and easier. Simultaneously, introduction of touch-tone dialing allowed the telephone company to listen in on operator performance remotely, from off-site telephones dialing up a secret access code. Federal and state government agencies, business employers, and non-profit organizations whose operations depended on high-quality customer service bv telephone continued to be active service-monitoring users, and newspaper stories periodically featured accounts of 4 to 5 thousand known employers engaged in such activity.[34] As we will see, this produced union protests, arbitration rulings, and some governmental activity. Concern over the use of monitoring to speed up telephone-operator performance unfairly paralleled factory-union protests in this period over the use the new numerically-controlled machine tools in industry to pace and monitor production work in ways that industrial unions said were "unfair speedups."[35]

In non-telephone office work, large non-union companies and government agencies split into two camps in this decade in their administration of repetitive clerical and white collar work. The dominant trend remained the Taylor-based close supervision approach applied to production-based office operations, such as data entry, units, typing pools, and customer-call work. However at a minority of organizations, new "human resources" approaches to administering office work were beginning to be adopted that downplayed close visual supervision and recording of production output. Rather, employee-manager performance appraisals were developed that identified quality as well as quantity goals and used these to determine individual merit pay and promotion decisions. In his study of Personnel Policies in Large Nonunion Firms, in the late 1970s, Fred Foulkes documented the trend to such approaches in the "progressive" manufacturing and non-manufacturing firms he studied.[36]

Some idea of the distribution of employer practices in the 1970s can be inferred from a national opinion survey on productivity conducted by Louis Harris and Associates in 1979 for Steelcase, the office furniture manufacturer.[37] 1,004 workers in offices with more than 25 employees were interviewed, with 60% of the sample consisting of clerical, secretarial, accounting, bookkeeping, and similar support-worker employees. (The remaining 40% were professionals, managers, and executives.) One question asked:

"As you may know, for many years people in jobs like manufacturing, farming, sales, and construction have had their productivity measured by how much work they produce in a given period of time. Have you personally ever had a job where how much you produced in a given period of time was measured?"

Among secretaries, only 27% said they had been in such a job, while 73% answered that they had not. Among clericals, 43% said they had been measured and 57% said they had not.

The executives in the survey were also asked whether their company "has attempted to measure how much work is produced in a given period of time by its office workers?" 45% of the executives said their company had done this, 50% said it had not, and 5% were not sure.

These responses do not clearly distinguish occasional productivity studies or setting general work standards from continuous monitoring. Nor do they tell us how such measuring was tied to pay, promotions, or discipline. However, Harris-Steelcase survey is useful in suggesting that less than half of clerical workers and only about a fourth of secretaries in business offices seemed to be working under any form of formal out-put measuring systems in this period.

C. Changing Social Attitudes

Major changes in social attitudes took place in the late 1970s related to our topic. After Watergate, exposures of Army, FBI, and CIA surveillance of dissidents, and concern over databank developments in handling citizen and consumer records, Americans stating that they were concerned about invasions of their privacy rose from a third in 1970 to 64% in 1978, as reported in a large-scale privacy survey conducted by Louis Harris and Dr. Alan F. Westin for Sentry Insurance in 1978.[38] In the area of employment and privacy, the Sentry survey found that strong majorities of the public -- and of full-time employees — believed that it was no longer proper for employers to ask job applicants about many topics that had once been traditional to collect. These included: information about an applicant's spouse; the applicant's neighborhood; membership in organizations; whether applicants own or rent their residence; whether applicants have been arrested but not convicted; and similar matters.[39]

On work monitoring, 66% of the public and 69% of employees believed that "installing closed circuit television to obtain continuous checks on how fast workers perform" should be forbidden by law. (51% of employers believed it should not be forbidden, 45% felt it should, and 4% were not sure.) However, only 42% of the public and 43% of employees believed that such closed circuit TV should be forbidden when employers use it "to prevent theft and pilfering by employees." 77% of employers believed such use should not be forbidden. When asked about employers "listening in on the conversations of employees to find out what they think of their supervisors and managers," 83% of the public, 84% of employees, and 70% of employers believed this should be forbidden.[40]

Reflecting such concerns and attitudes, the 1970s brought major federal privacy legislation (the Federal Privacy Act of 1974, the Financial Right to Privacy Act of 1978); similar fair-information-practices laws in half a dozen states; laws in sixteen states forbidding employers to use polygraphs for hiring or as a condition of continued employment; and legislation in half a dozen states giving employees the right to examine their personnel records and setting rules for disclosure of employee personal data to third parties.

Simultaneously, the women's rights cause became a growing, organized movement in the 1970s. Fair employment practices, the treatment of women in clerical jobs, and the impact of office automation on women's economic and social interests became central themes on the women's rights agenda. In 1978-80, articles, monographs, and public testimony by leading women's activist groups zeroed in on office automation as a menacing trend for women. The leading publication in this critique was Race Against Time: Automation of the Office, by Judith Gregory and Karen Nussbaum, issued by Working Women, the National Association of Office Workers, in 1980.[41] Machine monitoring was a key issue discussed in this report:

> The first step towards the office of the future is to apply the principles of factory production to office work. The move to electronics finally gives managers "a way to enforce discipline and standardization in the office," explained one participant in a recent brainstorming session of computer vendors, users and consultants. A "bonus" of

> office automation is that "business can finally monitor and measure the clerical function," according to Donald C. Vednais of the 3M Corporation's Business Communications Products Division. In fact, companies can "eliminate unnecessary managerial layers" of supervisors "whose primary activities are monitoring others" by using machines designed to measure the output, speed and errors of each employee. "The real payoff comes because managers are able to widen their span of control" — to increase the number of subordinates they can manage.
>
> Many computerized systems are designed to make it easier to enforce production quotas and the speed of work. "Automatic call distributors", for example, are widely used in the insurance industry and in other companies with departments where clericals "process" phone calls from customers. The device simultaneously tallies the number of calls each clerk handles, measures the average delay in answering calls, and counts the calls lost by the switchboard after 30 seconds of ringing. Time standards often set the pace for every clerical job within the insurance company: "coding each A-type claim is allotted 4 minutes, a B-type claim 4.7 minutes. Each clerk keeps a running record of the work she does on a production sheet" by task and day of the week. Computer terminals used by data entry operators record the number of keystrokes per minute and lines processed per day. Many of these "input typists" are paid piecework rates rather than an hourly wage. For claims processors, each claim is coded with the employee's name. The computer rejects any inaccurate forms, keeping track of the number of mistakes along with volume and speed.
>
> All of these measurements become part of each employee's work record, often without his or her knowledge. While many clericals today have to write down what they do on weekly clipboards, more and more of these time-study calculations will be computerized. Many more clericals will be monitored and measured for the first time in the near future.

The significance of women's activist groups taking up the office automation issue was that it brought a potentially powerful ally to the union cause. Since unions had enjoyed limited success in organizing women clerical workers, and most organizing was still the male-dominated, old-line-issue approach that had not appealed to most women clericals or professionals in offices, the joinder of women's activist groups in protesting against what they considered harmful uses of office technology —

including work monitoring practices — broadened the "union case" into a protest that would reach the mass media in the early 1980s.

Finally, American attitudes toward the employment relationship itself underwent major change in the late 1970s. With employment the key to health insurance and retirement benefits in a non-socialist society, with EEO enforcement and occupational health and safety protection now major public programs, and with an awareness that union representation covered only one employee out of five, and was not expanding, employees and the public began to be concerned that employers would not treat workers in arbitrary and authoritarian ways, and that there should probably be "some remedies" against employers who did so. As we will discuss in the next three sections, this shift from support of employer prerogative to an expectation of employer responsibility would begin to affect employment law and regulatory trends in significant ways.

D. Union Positions, Collective Bargaining, and Arbitration

Union activity in the late 1970s reflected labor charges that managements in many industries were increasingly using machine-based pressures to produce faster work. The position adopted by unions was that speedups, enforced by close work monitoring, were bad because this created harmful stress among employees and also compromised the quality of work provided to the public. More than a dozen unions representing employees in private-sector offices and customer service work took such stands. These included the Airline Employees, Communication Workers, Auto Workers (white collar division), Brotherhood of Electrical Workers, United Electrical Workers, Machinists, Newspaper Guild, Office and Professional Employees, Service Employees, Teamsters, Telecommunication Workers, and Typographers. They were joined by such public-sector unions as the Postal Workers and the State, County, and Municipal Workers.

By the end of the 1970s, the "unfair stress" theme had been joined by explicit privacy claims. This was aptly symbolized by the labor-supported Congressional hearings held in 1979 by a House Education and Labor Subcommittee, into "Pressures At The Workplace." A stream of union witnesses denounced industry work monitoring practices at these hearings.[43] Then, as part of the Carter Administration's "privacy initiative," responding to the U.S. Privacy Protection Study Commission's recommendations, the U.S. Department of Labor held hearings in 1979-80 into "Workplace Privacy." Union representatives testified at length about work monitoring practices as improper invasions of privacy. By 1980, the union position on work monitoring included the traditional "intrusive" aspects on close work monitoring, but had added a newer concern which criticized the failure of many managements to let workers see what records were being collected about their work performance. As students of privacy issues are aware, "limiting intrusiveness" and providing data subjects with "right of access" were key elements in the concepts of privacy and fair information practices that had been developed from the National Academy of Science's Databanks in a Free Society Report in 1972; the HEW Report in 1973; the Federal Privacy Act of 1974; and the report of the U.S. Privacy Protection Study Commission in 1977.

Though many unions protested in labor negotiations what they considered unfair uses of telephone-service monitoring, the only clause obtained in a major collective bargaining contract involving office work in this period was one obtained by three major telephone unions in the Bell System contract of 1980. This eliminated "diagnostic remote monitoring" as a management practice, but did not limit the main on-site monitoring of service operators.[44]

Arbitration rulings between 1975-1980 continued the basically "management prerogative" orientation of our baseline era. A series of decisions held that employers could use closed circuit TV cameras to record employees at work, whether as part of time-and-motion studies, to observe productivity, or to police high-risk areas for theft or misconduct.[45] Challenges to telephone service monitoring as a violation of state anti-wiretapping laws were also rejected by arbitrators.[46]

The failure of unions to win such grievances in arbitration, or to get monitoring addressed in collective bargaining led unions such as the CWA, the Teamsters, and others to concentrate in this period on efforts to obtain action by regulatory agencies or legislatures, to which we now turn.

E. Public Forums: Legislatures, Executive Agencies, and the Courts

At the federal level, the Report of the National Wiretapping Commission in 1975 recommended that the issue of employee service monitoring be left to private labor-management relations, thereby leaving intact the legal authority of the telephone company and employers using telephone equipment to engage in such conduct.[47]

The use by Federal agencies of employee service monitoring became the subject of public controversy in several Congressional inquiries in the late 1970s, with newspaper stories documenting such activities by the I.R.S., Social Security Civil Service Commission, Justice Department, and others.[48] The IRS, for example, disclosed that it monitored 325,000 calls a year out of some 30 million calls received, to determine whether tax advisors are giving the public "accurate information courteously."[49] A small-print notice on IRS tax-return forms and manuals informed recipients that the IRS might be conducting such monitoring when taxpayers called in to IRS service centers.* In 1978, the General Services Administration issued for comment a proposed regulation that would have barred federal agencies from listening in on such calls, even where advance notice had been given to customers (a la the IRS notice) and to employees. Protests by agencies and some government contractors led the GSA to shelve this proposal,[50] and federal-agency use of monitoring has continued down to the present.

At the state level, several other jurisdictions joined California and Georgia in setting rules and procedures for notifying employees or customers about the use of such monitoring, or requiring employers to register in advance with the state public utility commission before conducting such monitoring.[51] Under such a regulation issued in New Jersey in 1977, 177 employers registered to use employee service monitoring in the first year of the regulation's operation.[52]

In the judicial arena, a Florida Supreme Court decision interpreted that state's wiretap control law to forbid any taping of telephone calls unless all parties gave prior consent. This led employers such as Florida Power Corporation and the St. Petersburg Times to stop tape recording employee calls, for later discussion with employees about service quality and courtesy. Employers in Florida could and did continue to listen in and take notes for service monitoring purposes, as long as they did not make recordings.[53]

F. Summary

In the transition period of 1975-1980, management retained its broad legal right to set levels of satisfactory production for both factory and office employees, and to engage in various forms of visual or machine monitoring to see that employees met standards of quantity and quality.

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* Several federal agencies operating local offices in states regulating employee service monitoring stated that, as federal activities, they did not have to register with state public utility agencies and follow their regulations. See Wall Street Journal, March 12,1974.

FOOTNOTES FOR APPENDIX ITEM 1

1. Alan F. Westin, Privacy and Freedom (N.Y., 1967).

2. For Taylor's concepts in industry, see Frederick W. Taylor, Principles and Methods of Scientific Management (N.Y., Harper and Brothers, 1911). For "Taylorism" applied to office work, see William H. Leffingwell, Scientific Office Management (A.W. Shaw Company, New York and Chicago, 1917) and Lee Galloway, Office Management: Its Principles and Practice (Ronald Press Co., New York, 1918). Standard works reflecting critical views of "Taylorism" include: C. Wright Mills, White Collar (Oxford University Press, New York, 1956); Stanley Aronowitz, False Promises (McGraw-Hill, New York, 1973); Harry Braverman, Labor and Monopoly Capitalism: The Degradation of Work in the Twentieth Century (Monthly Review Press, New York, 1974); Richard Edwards, Contested Terrain: The Transformation of the Workplace in the Twentieth Century (Basic Books, New York, 1979); David Noble, America By Design (N.Y., Alfred A. Knopf, 1979); and Dan Clawson, Bureaucracy and the Labor Process (N.Y., Monthly Review Press, 1980).

3. George Stelluto, "Report on Incentive Pay in Manufacturing," Monthly Labor Review, Vol. 92, No. 7 (July, 1969), pp. 49-53. See George Strauss and Leonard R. Sayles, Personnel: The Human Problems of Management, Third Edition, (N.J. 1972), Chapter 27, "Incentives and Performance Standards; pp. 613-635.

4. Mills and Braverman, note 2 supra.

5. David Montgomery, Workers Control in America: Studies in the History of Work, Technology, and Labor Struggles (N.Y., Cambridge University Press, 1979).

6. Donald Kennedy, Charles Craypo and Mary Lehman, Labor and Technology: Union Response to Changing Environments (Phila.: Pennsylvania State University, 1982).

7. Sumner Slichter, James J. Healy, and Robert Livernash, The Impact of Collective Bargaining on Management (Wash.: Brookings, 1960), Chapter 12, "Union Policies Toward Technological Change;" Markley Roberts, "The Impact of Technology on Union Organizing and Collective Bargaining," in Kennedy et. al, note 6 supra.

8. Ibid.

9. Strauss and Sayles, note 3 supra.

10. Frank Elkouri and Edna Asper Elkouri, How Arbitration Works (Wash.; Bureau of National Affairs, 3d. edition, 1973), Chapter 13, "Management Rights."

11. See Barbara Garson, All The Livelong Day: The Meaning and Demeaning of Routine Work (N.Y., Doubleday, 1975); Louise Kapp Howe, Pink Collar Workers (N.Y., G.P. Putnam's Sons, 1977); Jean Tepperman, Not Servants, Not Machines (Boston: Beacon Press, 1976).

12. Letter of H.W. William Caming, Attorney, American Telephone & Telegraph Company, September 8, 1975, printed in NWC Staff Studies and Surveys, National Commission for the Review of Federal and State Laws Relating to Wiretapping and Electronic Surveillance, Washington, D.C., 1976, pp. 500-514.

13. In addition to Caming, note 11 supra, see: Re Investigation of Offering Monitoring Equipment by Telephone Companies, 70 PUR 3d 498 (1967), California; and notes to Section V, infra, on Georgia, West Virginia, and New Jersey State Public Utility Commission proceedings.

14. Caming, note 11 supra.

15. Ibid.

16. Id.

17. Id.

18. Letter of B.F. McLeod, Vice President, Communications, Pan American World Airways, August 18, 1974, in NWC Staff Studies and Surveys, note 12 supra., pp. 527-529, 533.

19. See the files of the Connecticut Workers and Technology Oral History Project, University of Connecticut, Storrs, Conn, 1981.

20. Testimony of IAM by George J. Poulin, Workplace Privacy Hearings, U.S. Department of Labor, January 28, 1980.

21. Commonwealth Edison Company, Grievance No. 27-235, May 21, 1967.

22. Boston Herald Traveler Corporation, Case No. 1130-0291-68, arb. award, November 12, 1969.

23. FMC Corporation, 46 L.A. 335 (1966). An individual's right of privacy held to protect him against publication of private statements or action, but employee's actions at work are not private actions.

24. See Caproco, Inc. and Upholsterers, Local 25, 56 L.A. 65; and Cooper Carton Corporation and Printing Pressmen, Local 415, 61 L.A. 697.

25. Eico, Inc., 44 L.A. 563 (1965). For a general discussion of arbitration rulings on monitoring, see Elkouri and Elkouri, op.cit. note 10, pp. 283-289 and 729-733.

26. Testimony of APWU, Daniel B. Jordan, Workplace Privacy Hearings, op.cit., note 20, January 29, 1980.

27. See Ken Rubin, "Electronic Monitoring in the Workplace", Perception, March-April, 1983, pp. 25-27.

28. For decisions involving a variety of challenged techniques alleged to be improper surveillance of protected union activities, see C. and J. Manufacturing Co., 238 NLRB 138 (1977); N.L.R.B.v. Medley Distilling Co. 483 Fed. 2d. 374 (1971); and Steelworkers v. N.L.R.B., 405 Fed. 2d. 1373 (1968).

29. See the discussion of service monitoring under Title III in Electronic Surveillance: Report of the National Commission for the Review of Federal and State Laws Relating to Wiretapping and Electronic Surveillance, Washington, D.C., 1974, pp. 28-29.

30. See Testimony of CWA, James Webb, Workplace Privacy Hearings, op.cit. , note 20, January 29, 1980, and NWC Staff Studies and Surveys, op.cit., note 12, "Service Quality Monitoring," pp. 496-499.

31. Jim Montgomery, "Concerns Eavesdrop on Employee's Phone Calls; Firms Defend Move, But Workers Are Angry," Wall Street Journal, March 12, 1974.

32. Ibid.

33. See Alan F. Westin and Michael A. Baker, Databanks in A Free Society (N.Y., Quadrangle, 1972), Appendix B.

34. "Concerns Eavesdrop...," note 31 supra; Ronald Kessler, "A.T.&T. Monitors Some Phone Calls," Washington Post, August 25, 1974; Spencer Rich, "U.S. Agencies Defend Their Monitoring of Citizens' Calls, Washington Post, October 18, 1978; "Customer Calls Were Tape Recorded to Study Employees, Power Firm Says," Miami-Herald, February 5, 1978, Richard H. Meeker, "Local Businesses Eavesdrop (on) Calls," Willamette (Oregon) Week, May 9, 1977.

35. See IAM Testimony, Workplace Privacy Hearings, op.cit. note 20; also Testimony of United Electrical, Radio and Machine Workers, Hugh Harley, Ibid, February 19, 1980. See also Braverman, Edwards, and Noble, note 2 supra.

36. Fred K. Foulkes, Personnel Policies in Large Nonunion Firms, (Englewood Cliffs, N.J., Prentice-Hall, 1980)

37. Comfort and Productivity in the Office of the 80's, The Steelcase National Study of Office Environments, No. II, Conducted by Louis Harris and Associates, report published 1980.

38. The Dimensions of Privacy: A National Opinion Research Survey of Attitudes Toward Privacy, Conducted for Sentry Insurance by Louis Harris and Associates and Dr. Alan F. Westin, 1979.

39. Ibid. Page 33.

40. Ibid. Page 35.

41. Judith Gregory and Karen Nussbaum, Race Against Time: Automation of the Office (Cleveland: Working Women, National Association of Office Workers, 1980).

42. All of these unions testified at the Carter Administration's Workplace Privacy Hearings, note 20 supra.

43. Pressures At The Workplace, Hearings before the Subcommitte on ________________ , House Education and Labor Committee,_____ Congress,____Session, 1979.

44. George Kessler, CWA, Changing Competitive and Technology Environments in Telecommunications," in Kennedy, Craypo and Lehman, note 6 supra, page 72.

45. In addition to rulings in note 24, see Hobart Manufacturing Co. and Electrical Workers, IVE, 62 L.A. 1285 and Colonial Baking Co. and Bakery and Confectionery Workers, 62 L.A. 586.

46. Casting Engineers and Electrical Workers, UE, Local 1114, 76 L.A. 939.

47. Electronic Surveillance, note 29 supra. pp. 28-29.

48. See the Washington Post, October 18, 1978, note 34 supra.; David H. Rothman, "Big Brother May Be Listening In," Washington Post, June 3, 1979.

49. Washington Post, October 18, 1978, note 34 supra.

50. "GSA Acts to Block Listening Devices on U.S. Agency Phones," Washington Post, July 6, 1978; Washington Post, October 18, 1978.

51. New Jersey, Wisconsin, Massachusetts.

52. Report of New Jersey Public Utility Commission, 1977, Trenton, N.J.

53. Quoted in Miami Herald, February 5, 1978, note 34 supra.

Item 2: Two articles from the Communication Workers of America on a joint Company-Union experiment with "no monitoring" work settings.

THE BOSSLESS OFFICE

A bright, spacious work setting features low dividers between stations because HOBIS workers prefer to be able to see each other and have a full view of the room and electronic message board.

It sounds like every worker's dream: a bossless office.

These are telephone operators at work. But here they are relaxed, smiling, joking with each other, giving customers as much time and attention as they need. They get up from their stations frequently and move around. Their work area is open, spacious, decorated with bright Southwestern art the workers have chosen themselves.

It is HOBIS, the AT&T hotel billing and information system office in Tempe, Arizona, near Phoenix, one of only a handful of autonomous work group experiments in the world—and certainly one of the most successful so far.

The unit, exactly a year old, handles guest long-distance billing inquiries from hotels and motels throughout Mountain Bell Telephone's vast service area, a function previously performed by TSPS operators (traffic service position systems).

No supervisor ever walks the floor at HOBIS, nor monitors their conversations with customers. There is no need to, for the workers are their own bosses, and "they police themselves as well as any management team could," says CWA Local 8519 President Reed Roberts. Decision making, both short and long term, is made through a Quality of Work Life (QWL) committee.

What it means for the 130 operators is that "this is our office, not management's. We are proving that you can have a good working environment and still get the job done, and done even better," says Marilyn Stancliffe, who served on the original QWL committee that designed HOBIS in January of 1983.

Those operators who formerly worked in the directory assistance (DA) and TSPS units which share the same building with HOBIS are acutely aware of the contrasts in job settings.

"I was ready to give it all up, despite the years I had put in," says Geraldine Heller. She had transferred to a directory assistance job in Phoenix after having worked for 12 years as a supply clerk for Illinois Bell. "Working in supplies was okay," she says, "but as a DA operator I decided I was too old to have someone looking over my shoulder all the time and telling me when I could take a potty break."

When plans for the HOBIS experiment were announced in late 1982, Heller and more than 300 operators immediately applied for the new unit.

"We still have enormous pressure from operators wanting to join HOBIS," according to Chief Steward Dennis Couture. "But we can only add people slowly, as we grow, because no one wants to leave this place."

'A Gutsy Decision'

This unique autonomous work group was born out of concern by company District Manager Ed Murdock that supervisors were spending too much time with operators who didn't need attention, and a hunch on his part that workers with good work records are motivated enough to perform at least as well without supervision.

Plans to create a new hotel billing office in Tempe gave Murdock an opportunity to think about implementing his idea—provided that the union would cooperate and help develop the program through the QWL process.

Few union leaders were likely to be more responsive to the proposal than CWA District 8 Vice President Walt Maulis, a believer in QWL, and local leader Roberts, who worries that "unions just have to find new ways to represent people and attract members, especially in a right-to-work environment."

Says Maulis: "We were more willing to take the risk. The co seemed sincere about wo [illegible] us, and I've always believed th much could be accomplished through a more cooperative ap proach." Besides, he adds, "W been telling AT&T for years th they were too-heavy in manag

Roberts points out that Ed M dock "made a gutsy decision t propose this concept. You can imagine what his fellow mana thought of it—workers runni own office . . . *no supervisors*. had flopped, it wouldn't have his career much good."

As it happened, the district ager looks like a hero. The T HOBIS is the most profitable hotel billing units throughout country, with an astounding 4 cent profit margin.

Contributing to efficiency i replacement of supervisors w enue-generating operato mated cost savings of 35 percent, and a low absentee rate of .3 percent as compared with AT&T's nationwide rate of about three percent.

In addition, the operators have proven to be super-salespeople. "We are very much aware that our jobs, and the continuation of HOBIS, depend upon running a profitable operation, especially with growing competition," says Marilyn Stancliffe, adding: "In that sense, the workers are thinking like managers. And they come up with some good ideas for improving service because they are close to the customers on a daily basis."

Some of the innovations HOBIS operators have introduced to improve customer relations and build their business:

—The Tempe HOBIS now places overseas long distance calls for hotel guests, which previously was handled by AT&T Long Lines in New York. "We were missing out on this additional revenue," says Alice Hernandez, who worked out the technical difficulties in providing the service. "Also, we can place the calls faster which makes both the callers and the hotel personnel happier," she notes.

—The operators send letters of commendation to customers who are especially friendly and helpful—a turnabout that has helped solidify business accounts.

—Customer complaints "have dropped to zero," says Chief Steward Couture, because of a new system of checking back with customers and following up immediately on reports of poor service.

How Bossless Management Works

"Peer pressure," that's what keeps workers—especially new arrivals—from abusing the freedom of an office without supervisors, according to Ed Murdock.

The union's Dennis Couture likes to modify that expression and call it "peer support." He says: "We try to be positive about it and persuade fellow workers, if they aren't pulling their weight, that they must support the group. The key thing is, we are not evaluated as individuals but on the basis of group success. When people understand this, they respond. They want to contribute to the group rather than drag it down."

Even in an office without supervisors, someone must hand out daily assignments, but the HOBIS group has worked out a system that keeps "bossism" at a minimum. The workers take turns functioning as the "line person," who makes station assignments and generally directs traffic for the office.

The unit has experienced only one non-strike-related grievance over the past year, and that dispute was amicably settled in less than eight hours, according to Local President Roberts. "The QWL committee doesn't get involved with disciplinary matters—that would destroy the whole concept," he stresses. Grievance matters revert to the traditional labor relations process and are handled by a second-level supervisor who is designated as the management "resource person" to HOBIS.

That resource person also serves as the company's representative on the seven-member QWL committee but has no authority other than as a group member. The HOBIS workers serve on the committee according to a rotation system.

The QWL committee, which meets weekly, determines force needs and scheduling, makes decisions on financial expenditures, and generally deals with all problems that normally would confront first-line supervisors.

"One of our biggest concerns when we began this program was to make sure that our committee didn't and participate in the discussions.

Participation in the HOBIS program also is broadened through the work of other committees that deal with customer service, safety, office decorating, and special projects.

Is HOBIS Unique?

Clearly, the autonomous work group at HOBIS had every advantage from the start: committed and progressive company and union leaders to launch it, and the opportunity to design a new program from scratch, staffed with workers hand-picked for their good work records.

How widespread can the HOBIS pattern be extended? Can it be introduced in existing work places with a history of poor human relations?

"This program shows that when labor and management work together, they can make tremendous changes in the work place to eliminate unnecessary pressures and improve conditions," said Vice President Maulis. "I think this kind of program can be put in place in all kinds of offices, not just in operator services," he said, noting that newer experiments with other telephone industry units in Colorado are working well so far.

Ed Murdock, who went with Mountain Bell in last month's reorganization while the HOBIS unit shifted to AT&T Communications, looks forward to introducing similar programs, in conjunction with the union, among groups of directory assistance operators in his new area of responsibility. "I think we can transplant many of the same approaches," he says.

The local's Reed Roberts is proud of HOBIS, but remains cautious about Quality of Work Life as a widespread phenomenon. "When it works, it works," he says, adding that, "we did it right at HOBIS. You have to have a commitment from both sides and a lot of trust. If that's lacking or if it breaks down, then I'm very comfortable with going back to a traditional, adversarial relationship with management."

For now, HOBIS is a shining success. The program survived the three week national CWA-AT&T strike last fall, and it looks like it will survive the Bell System breakup as well. Ed Murdock, while no longer on the scene to nourish the program from management's end, is convinced that the new managers at AT&T Communications share his determination to keep this unique and successful program working.

For their part, workers like Geraldine Heller are determined to make HOBIS continue to flourish because: "They treat you like a human being here and you go home at the end of the day feeling good about your job and about yourself."

CWA
LOCAL 8515

A. HOBIS

Two years after CWA negotiated a national QWL program with the Bell System, a Mountain State Bell District Manager contacted the Union to determine if they were interested in jointly designing a Hotel Billing Center for the Rocky Mountain States region. The Union weighed the risks of such a proposal and decided it was worth pursuing.

The offices consist of over 100 union represented operators working in a seven day, twenty-four hour environment that handles 11,500 calls per day from a seven state region with an annual budget of $2.4 million. The operators provide charges to hotels on customer dialed long distance calls; arrange refunds for customers who lose money in pay phones; and give credit on incorrectly dialed long distance calls.

In December 1982, a local QWL committee met to define their objectives. They established a successful, self-managed office as their goal. Five objectives to achieve the goal were stated:

-- effective communications with the entire workforce
-- fair and satisfactory working conditions
-- self development of all employees
-- team work and participation by all employees
-- efficient office-management methods

By February 1983, the local QWL committee (managers and union operators) has designed a unique HOBIS office. It was a HOBIS office without any first level supervisors. Operators would be responsible for office productivity training; quality of service, miscellaneous expenses and overhead, office practices and procedures, and attendance.

The joint office design committee eliminated the two most odious management control mechanisms in Operator Services: Average Work Time and Remote Observation. Service monitoring is done by peers who are able to offer advise on how to handle difficult situations, while AWT is measured for the entire office, not for each operator.

The HOBIS office saves $200,000/year in management salaries. The savings are primarily used for extra training. Average work time for the office as a whole is equal or below the other 14 HOBIS offices in the U.S. despite the fact that only the QWL designed office handle time-consuming coin refund calls. There were also fewer customer complaints and union grievances than other offices. Absenteeism was ten times lower than the system at .3%.

The Operators have modified various operating procedures to make work better and provide higher customer satisfaction. Following internally developed recommendations Operators now place overseas calls directly and check back with customers to see that they've received service. To prevent a return to "bossism" all operators rotate assignments to sit on the QWL committee which meets weekly and some forty operators volunteered to take turns to make up the daily schedules.

Committees and subcommittees have been formed to develop solutic to specific problems and formulate policy. For example, the governir QWL committee formed a customer-contact task force to study customer satisfaction. Their policy and program recommendations encompassed developing a customer-contact seminar; giving recognition to hotel clerks who are helpful; fostering moreopen communications and assis tance among operators while working their positions and being more flexible with work rule in order to satisfy customers.

Could this system be prepackaged and moved elswhere? It's not that simple. The development of an autonomous work group required time, training, resources are available. Out of the HOBIS experience comes the emphasis on total system design which must guarantee that:

-- decisions are made at the lowest level possible
-- self management for individuals and groups is maintained as a basic tenet
-- there is end-to-end responsibility for the job
-- hierarchies are flattened
-- the potential of all individuals and groups is developed to the fullest extent possible
-- quality and efficiency are the primary goals
-- creativity is encouraged
-- purpose and goals are clearly defined and understood by everyone
-- health and safety measures are designed into the system

Where this kind of commitment is present, there are benefits for everyone involved.

Item 3: Survey and findings by ConnectiCOSH and the CUTW of Southern New England Bell VDT operators, on the relation between monitoring and stress

The Connecticut Council on Occupational Safety and Health undertakes research, education and other projects designed to prevent job-related illness and injury.

As someone using a video display terminal (VDT) you have joined the ranks of a large and growing workforce. There are many unanswered questions about the work you perform. For instance: Do VDTs cause eye strain, stress and other problems? Are jobs improved or made more boring?

ConnectiCOSH is undertaking this statewide survey to determine what, if any, problems are related to VDT use, and to determine whether employers are meeting the challenge of this new technology. Your help is greatly appreciated.

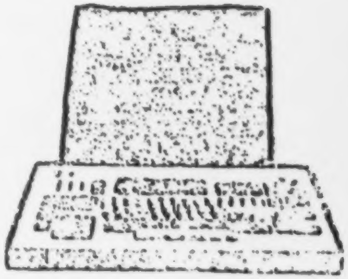
If you have any questions, you can call either:

Sue Swartz at 278-4353,
Chairperson, Women's
Committee on New Technology

Jane Fleishman at
1-800-223-WORK, Coordinator,
Division of Worker Education,
Workers' Compensation Commission

Thank you.

How does YOUR employer rate?



A GUIDE TO MONITORING YOUR EMPLOYER

Please answer as honestly as possible. All answers will be kept confidential with ConnectiCOSH.

General Information

1. Age_______ 2. Male_______ Female_______

3. Name of Employer____________________

4. How long have VDTs been used at your company? ________

5. How long have you worked on a VDT?____________

6. On the average, how many hours a week do you use a VDT?____________________

7. What is your job title?____________________

Office Design

1. Were you consulted on any of the following:

   Type of equipment to be installed ____________

   Arrangement of the room ________________

   Lighting! noise ____________________

2. Did you receive proper training on the use of the machine?____________________

3. How many other employees use VDTs in your office?

   ____

4. Do you perform duties other than those requiring a VDT?______ If so, how often?____________

5. Are you entitled to rest breaks? ____________

   How often?____________________

6. Is your VDT used to monitor your productivity or job performance?____________________

   If yes, is the information used to discipline employees? ____________________

7. Please answer yes or no to the following:

	Yes	No
A. Does your VDT have a detachable keyboard?	____	____
B. Is your chair adjustable?	____	____
C. Is the VDT screen adjustable?	____	____
D. Is the lighting adequate in your office?	____	____
E. Is there glare on your VDT screen?	____	____

Health Concerns

1. Do you experience any of the following? How often?

   ____ Dizziness

   ____ Difficulty focusing eyes

   ____ Headaches

   ____ Muscle aches

   ____ Feeling tense

   ____ Stomach problems

   ____ High blood pressure

   ____ Vision

   ____ Problems with pregnancy

Optional:
Complete the following if you want more information:

NAME____________________________

ADDRESS____________________________

PHONE____________________

____ YES, I'D LIKE TO SEE THE RESULTS OF THIS SURVEY.

____ YES, I'D LIKE SOME MORE INFORMATION ABOUT VDTs.

____ YES, I'D LIKE SOME IDEAS ON WHAT I CAN DO ABOUT VDTs IN MY OFFICE.

PRELIMINARY RESULTS OF THE VDT SURVEY ON CUTW MEMBERS

APPROXIMATELY 6.400 SURVEYS WERE SENT TO ALL CUTW MEMBERS WORKING IN TITLES THAT INVOLVED VDT WORK. 926 COMPLETED SURVEYS WERE RETURNED, A RESPONSE RATE OF 14.5%

	FREQUENCY	PECENTAGE
GENERAL INFORMATION		
(1) AGE		
UNDER 30	213	23.00%
30-39	355	38.33%
40-49	163	17.60%
50-59	148	15.98%
60+	23	2.48%
(2) GENDER		
MALE	197	21.27%
FEMALE	719	77.64%
(4) HOURS PER WEEK		
UNDER 10	54	5.8%
10- 19	74	7.9
20- 29	141	15.2
30 +	644	69.5
(3) JOB TITLES		
ACCOUNTS INVESTIGATION CLERK	4	
ADMINISTRATIVE SERVICE CLERK	10	
ANALYSIS CLERK	3	
BENEFIT ANALYST	4	
CENTRAL OFFICE TECHNICIAN	45	
CLERK	25	
COMPUTER OPERATOR	14	
CONSTRUCTION OFFICE CLERK	4	
CUSTOMER RESPONSE CLERK	3	
DATA ENTRY OPERATOR	11	
DIRECTORY ASSISTANCE OPERATOR	200	
ENGINEERING ASSISTANT	11	
ENGINEERING ASSOCIATE	27	
ENGINEERING CLERK	8	
EQUIPMENT CLERK	17	
FACILITIES ASSIGNER	20	
FINAL ACCOUNTS CLERK	6	
GENERAL CLERK	8	
LINE ASSIGNER	23	
MAINTENANCE ADMINISTRATOR	53	
MAINTENANCE TECHNICIAN	3	
METHODS ANALYST	7	
NETWORK ADMINISTRATION CLERK	8	
PLANT ENGINEERING CLERK	4	
PROCESS CLERK	4	
REPAIR SERVICE CLERK	17	
SENIOR CLERK	5	
SERVICE ASSISTANT	9	
SERVICE ORDER CLERK	33	

(12) HEALTH CONCERNS

DIZZINESS	195	21.0
DIFFICULTY FOCUSING EYES	565	61.0
HEADACHES	593	64.0
MUSCLE ACHES	560	60.5
FEELING TENSE	616	66.5
STOMACH PROBLEMS	172	18.6
HIGH BLOOD PRESSURE	132	14.3
VISION	455	49.1
PROBLEMS WITH PREGNANCY	28	3.0

(13) MATCHING YES TO MONITORING WITH YES TO HEALTH CONCERNS

	YES TO BOTH	HEALTH CONCERNS	PER CENT
DIZZINESS	150	195	76.9
DIFFICULTY FOCUSING EYES	403	565	71.3
HEADACHES	433	593	73.0
MUSCLE ACHES	415	560	74.1
FEELING TENSE	461	616	74.8
STOMACH PROBLEMS	125	172	72.6
HIGH BLOOD PRESSURE	98	132	74.2
VISION	335	455	73.6
PROBLEMS WITH PREGNANCY	21	28	75.0

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    SERVICE ORDER REVIEWER                    11
    SERVICE REPS                             244
    SPECIAL SERVICE COORDINATOR               18
    SPECIAL SERVICE TECH                       3
    SPECIAL TYPIST                             6
    TECHNICIAN                                 5

OFFICE DESIGN

(6) WAS EMPLOYEE CONSULTED ON FOLLOWING
    TYPE OF EQUIPMENT                         29                3.13%
    ARRANGEMENT OF ROOM                       87                9.39%
    LIGHTING OR NOISE                         65                7.01%

(7) RECIEVE PROPER TRAINING
    YES                                      726               78.40%
    NO                                       161               17.38

(8) HOW MANY OTHER EMPLOYEES USE VDTS
    IN YOUR OFFICE
    UNDER 10                                 106               11.44
    10-19                                     99               10.69
    20-29                                     46                4.96
    30+                                      493               53.23

(9) A- DO YOU PERFORM OTHER TASKS BESIDES
       VDT WORK
       YES                                   495               53.45
       NO                                    405               43.73
    B- HOW OFTEN
       UNDER 10 HOURS                        183               19.76
       10-19                                  59                6.37
       20-30                                  87                9.39
       30+                                    44                4.31

(10) VDT WORK IS MONITORED                   625               67.5
    MONITORING IS USED FOR DISCIPLINE        466               50.3

(11) ERGONOMICS
    A- IS KEYBOARD DETACHABLE
       YES                                   791               85.42
       NO                                    121               13.06
    B- IS CHAIR ADJUSTABLE
       YES                                   768               82.93
       NO                                    150               16.19
    C- IS SCREEN ADJUSTABLE
       YES                                   728               78.61
       NO                                    190               20.51
    D- IS LIGHTING ADEQUATE
       YES                                   505               54.53
       NO                                    409               44.16
    E- IS THERE GLARE ON SCREEN
       YES                                   646               69.97
       NO                                    270               29.15
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Item 4

9to5 Newsletter
May/June 1986

Computer Monitoring and Other Dirty Tricks

"I can't even go to the bathroom without being watched. I have to put up a flag at my terminal, wait until the restroom is empty, sign out, sign back in, and remove my flag."

"When people call you feel really guilty if you stay on the line. That conversation means seconds to you, and you don't make quota that day. So you end up withholding things that might help people."

Absurd and Sinister

9to5 has released a new report called "Computer Monitoring and Other Dirty Tricks," which gives an overview of the methods and scope of electronic surveillance, an analysis of the problems, and recommends alternatives.

"From counting trips to the restroom to keystrokes per second, office computers are being used in absurd and even sinister ways," says Karen Nussbaum, executive director of 9to5.

One state-of-the-art monitoring system can be programmed to listen in on employees and pick up key phrases from their telephone conversations.

Depending on management's motives, the technology can be used to detect a worker's political involvement, 9to5 or union activity, or personal problems.

"There's a host of computer accessories that are now being used by managers to watch over and control office workers to an extent that was never possible before. The goal is higher productivity, but the result is miserable working conditions for office workers," Karen says.

Bad Management

There are now 15 million video display terminal (VDT) operators in this country. The National Institute of Occupational Safety and Health (NIOSH) estimates that two-thirds of them are monitored.

"Computer monitoring is a bad idea. It invades workers' privacy, and it often results in unfair, arbitrary evaluation of a person's work. It reduces the workers' control over his or her work, and it cuts down on human contact. And it greatly increases stress and the potential for stress-related diseases," says Karen.

"When you examine computer monitoring carefully, as 9to5 has done, you realize that it is not only bad for workers, it is also bad management," Karen says. "In the long run, it ends up cutting into productivity instead of increasing it. There are alternatives to computer monitoring. We think managers should take advantage of them, and stop playing dirty tricks on their workers."

Copies of "Computer Monitoring and Other Dirty Tricks" are available for $4 (members) $5 (individuals) and $8 (institutions) plus $1.50 postage and handling, from 9to5, 614 Superior Ave., N.W., Cleveland, OH 44113.

Video Views
May/June, 1986

Service-With-A-Smile

Airline Worker Speaks Out About Her Job

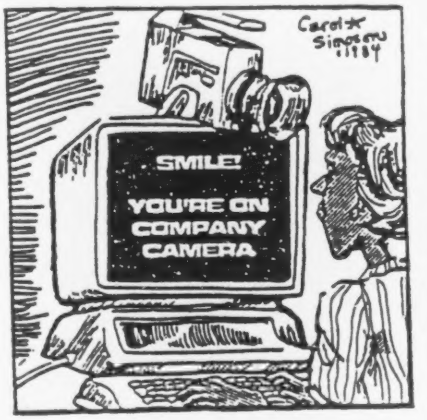
By Anne Gordon

Pacific Southwest Airlines (PSA) spends over one million dollars a year to convince consumers that they are purchasing service-with-a-smile, but that cheery maxim is not quite true, as Toni Watson reported at the recent VDT Coalition Speak Out. Watson is a PSA reservations sales agent. "To tell the truth," said Watson in her moving and at times horrifying testimony, "we don't feel much like smiling at all in the reservations center."

Each day Watson and her co-workers plug into a computer system which monitors many aspects of their performance for the entire day. In fact, says Watson, "We punch in and out of three units: the timeclock, the VDT, and the telephone keypad known as 'Collins.' We plug a phone jack into Collins which is attached to our headsets and receive telephone calls. The VDT and Collins track every micro-second of our workday on computerized performance records." Daily print-outs are produced on each worker's performance. Weekly print-outs map each agent's sales and production quotas as well.

In addition, agents are monitored on their "call length time." Watson described the meaning and process of this measurement. "When someone calls PSA, we have 106 seconds to process your call, complete business and take the next call on hold. This is the office standard. To the salesperson who was hired because of 'people-oriented abilities,' this does not give one a lot of time to be friendly and personable."

To insure that this procedure is complied with, there is a "Quality Assurance" staff. These people secretly monitor the calls between the agents and the customers. If they don't like the way a call is handled, they write you up." Agents are written up if they do not pursue a sale aggressively enough or do not take enough calls per hour. Watson explained, "They continue to monitor your performance and if you do not improve to their satisfaction, they start issuing warnings which can lead to job loss."



This type of Orwellian nightmare is only half of the story. Workers are also checked for "unplugged time." Watson described the typical workday with two paid 15-minute breaks, and 30 minutes, unpaid, for lunch. For the remaining seven and one half hours, employees are "only allowed to leave their positions for 12 minutes per day. "This includes bathroom breaks, rest breaks, walking breaks, talking to co-workers — everything! We are expected to be seated, processing phone calls for the entire remainder of the day."

Watson described her personal episode with monitoring and unplugged time on the job. "After four years on the job, I was told I would have to improve or lose my job. I did improve, but it was not enough — I was still three minutes over standards. The job stress became unbearable. One day my supervisor stood over me with a performance report and I knew what was coming. They were again dissatisfied. I tried to work; I felt completely dehumanized. I was mechanically typing and talking but part of me felt deadened. The voices around me were hollow sounds in my head and I could barely function. I looked at my supervisor and said I could not continue to work. She said if I was sick, to go lie down for ten minutes, pull myself together and finish my shift.

"My mind snapped. I said that I did not know what was wrong with me, but I had a feeling that it would take me longer than ten minutes to get over it. I called in sick for the next week and wept every day. I couldn't function and couldn't relate to my family. I finally went to see a counselor through the union employee assistance program who worked with me for eight months to help me recover from a work-related, job stress nervous breakdown."

Toni Watson's story is only one of many. Monitoring is one of the more insidious VDT-related health hazards and it is being used more and more frequently to track worker performance levels. As Watson advocated in the final moments of her testimony, "The need for legislation to protect all VDT workers is essential. The need for regulation of the automated office industries is great."

At the end of her moving testimony, almost in tears, Watson thanked the audience for listening so attentively to a story that was clearly difficult to tell. But for delivering such an honest and impassioned plea, clearly the thanks go to Toni Watson.

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The IUE News
June 1986

'D' FOR DISTRESS—A survey of over 900 VDT workers suggests a strong link between health complaints and electronic monitoring through the terminals. In the survey, conducted by the Connecticut Union of Telephone Workers, employees identified tension, headaches, trouble in focusing and muscle aches as the most common health problems on the job. And more than 70% reported their work was electronically monitored. Since most of the workers had ergonomically correct terminals and equipment, the union said the monitoring itself was the main problem.

CWA News
July, 1986

"AT&T Strikers Beat Back Takebacks, Win 10.2% Wage-Benefit Gains"

After striking nearly a month, CWA members at AT&T won a three-year settlement featuring wage and benefit improvements valued at 10.2 percent and an employment security package that President Morton Bahr described as "a quantum leap toward our ultimate goal of guaranteed lifetime employment."

The pact, subject to ratification by the 155,000 CWA-represented members, contains improvements worth nearly $750 million.

Settlement at the national level came June 17 when AT&T agreed to keep cost-of-living language in the contract (although COLA application is deferred during this agreement), to give CWA assurances that subcontracting won't take place during layoffs or in areas where surpluses have been announced, to improve protections for systems technicians at AT&T Information Systems (ATTIS), to remove its demand for eliminating percentage differentials, and to protect the lifetime earning potential of wage incentive workers.

Dozens of problem issues that remained on the local bargaining unit tables took days of marathon negotiation to resolve and prolonged the strike until June 26. The walkout began on June 1. . . .

Average Work Time

There will be no discipline solely on the basis of Average Work Time (AWT) of operators. New productivity measure will be developed to measure operator performance, and local union-management teams will work together on programs regarding generation of revenues and customer satisfaction.

Policy Statement adopted at Seventeenth OPEIU Triennial Convention, 1986.

White Collar
July-August-Sept. 1986

New technology

Delegates expressed their concern with "uncontrolled use of technology to raise productivity" and pledged local unions to pursue safeguards for workers at the bargaining table and through legislation. Just a few of these are: union participation in the planning for and introduction of new technology; company training policies that benefit workers; flexibility between occupations; ban of monitoring, machine-paced work and electronic homework; safe and healthy working conditions, and a protection against dismissal.

Automated Times
Vol. 2, No. 2, Fall 1986

911 Is Watching You

"Monitoring is fine -- up to the point of timing our bathroom breaks. That's @¢#%!"

"It's a two-sided thing. If someone's not doing their share and causing more work for the others, it's good to have the computer to prove it. But with bad managers it could be a tool to get rid of someone they don't like. It's all in how it's used."

"It's like having your boss standing over your shoulder every minute. But it's a necessary evil."

These are some reactions of 911 (emergency dispatch) operators at the Boston Police Department to the monitoring system that connects their telephones with a computer. The computer keeps track of each operator's average call length, time at lunch and on breaks, and any outgoing calls. Supervisors receive printouts of each individual's hourly and daily "statistics".

This is the first of a series of articles on computer monitoring -- where is it happening and how is it being used.

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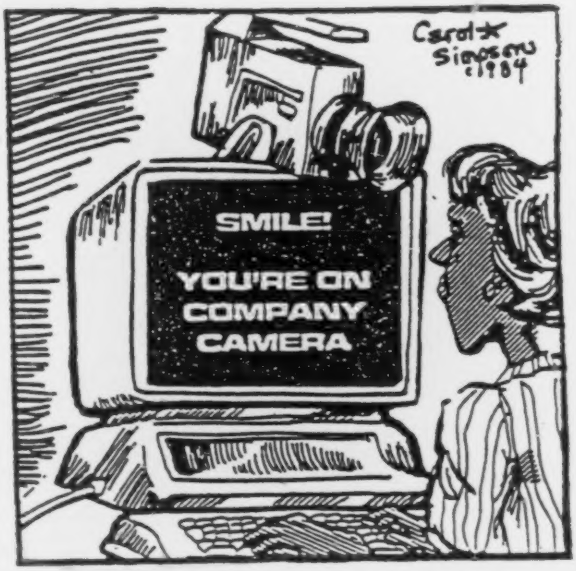
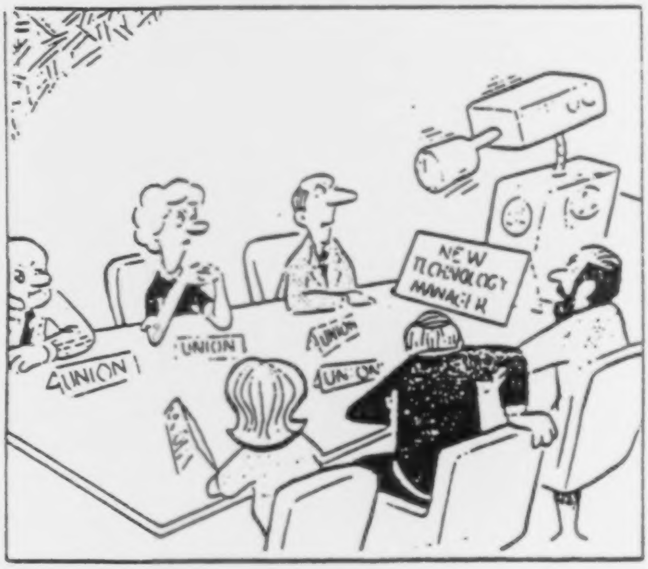
911 operators we interviewed seem to agree that some monitoring helps to insure everybody is covering their phone, which is critical to their job. But the affects of monitoring depend on how the information collected by the computer is used. Operators fear that their newly upgraded monitoring and taping system may be used unfairly to discipline workers. Some feel that unnecessary stress has already resulted.



Discipline By Computer

In 1984, employees obtained a "verbal agreement" from management that the new Horizons monitoring system would not be used for disciplinary purposes or pay adjustments. This agreement was made possible by a union contract which guarantees the right to negotiate when any new technology is introduced. Just last month, however, David Kitchen, a union steward for the department, overheard a conversation indicating supervisors were considering using the information collected to take disciplinary action against 911 operators. Kitchen is now negotiating to secure a written policy to prevent discipline based on computer statistics.

The 911 department is different than a lot of office work, because many calls are life-or-death situations. So operators being away from the phones too much or making outgoing calls can have serious consequences. Especially during the night shift, when there is little human supervision and when most of the emergency calls come, computer monitoring is a way of knowing who leaves their stations too often. The operators interviewed agreed that monitoring was a valid tool in this instance. According to Nancy Sable, a 911 operator for 12 years, "Operators who aren't by their phones make the job harder for the others, and it's better to have a supervisor mention excess break time than to have to talk with a coworker yourself."



Blind To the Human Side

But operators worry that supervisors evaluating them by the numbers might not understand valid exceptions to the computer's rules. For example, a longer average call length could mean that an operator got one or more suicide calls, says Kitchen. Or someone might need to use the bathroom a lot because they are sick. Operators agree that current supervisors are reasonable and understanding of such excuses. But some feel that having to explain is demeaning. "The system is babysitting you", says one operator who asked not to be identified. "I stopped being babysat when I was three years old. Whether you're gone two minutes more shouldn't matter." She admits that supervisors haven't made a big issue of extra breaks "yet! The system was put in for a reason -- to keep us under a big thumb."

All calls are tape recorded, even those on non-911 phones. Another operator felt that "You have to watch everything you say", because the headsets are so sensitive that they can pick up conversations around the office. "They know everything we do, say, or eat."

Many operators are hopeful that throu their union, SEIU Local 285, and a joi labor/management committee they can preve abuses of computer monitoring. Kitche for instance, feels confident he will be su cessful in preventing disciplinary action bas on monitoring (although he says the less he's learned is to get everything in writin Still, the concerns remain. "It's mostly our heads: nothing real bad has happen yet", said one new employee. "But it fee like someone's standing over our shoulder Is this 1984?"

The Guild Reporter
Sept. 12, 1986

Report warns of monitoring pitfalls

Washington—"Appearing to drive employees faster and faster to the point where they become angry and quit is a poor management technique," a computer trade association cautions in suggesting how employers can make the best use of computer monitoring systems.

While managers that "inch-up" on production standards so that employees "have to work harder and harder to achieve the same rate of pay" run the risk of dampening morale and causing employees "undue distress," a computer's automatic monitoring capability can be rewarding to both employers and their employees, the Computer and Business Equipment Manufacturers Assn. said in releasing its list of suggested monitoring techniques.

Monitoring production can be rewarding to "high-achieving employees," CBEMA said, counselling employers to reward individuals with "incentive pay for work done above a certain level" or through "verbal or promotional rewards." Computerized tracking of output can also help employees meet their goals and those of their employer, the association said.

It added a warning about "using statistics to inspire competition," however, noting that while public recognition of high achieving employees can be positive, "most employees resent receiving public criticism." Posting all individual scores "can backfire by making that half of employees who are . . . 'below average' angry and tense," it said.

The release urged management to measure individual employees' progress against goals and departmental averages and to advise employees when their work is being monitored.

"Measure only those items that are essential for meeting organization goals," the release suggested, adding that if keystrokes are "the only relevant statistic, don't collect information on the number of breaks" an employee takes.

CBEMA President Vico Henriques, meanwhile, suggests that employers "can capitalize on the entrepreneurial spirit of many workers by using measurement to foster individual initiative and a spirit of competitiveness."

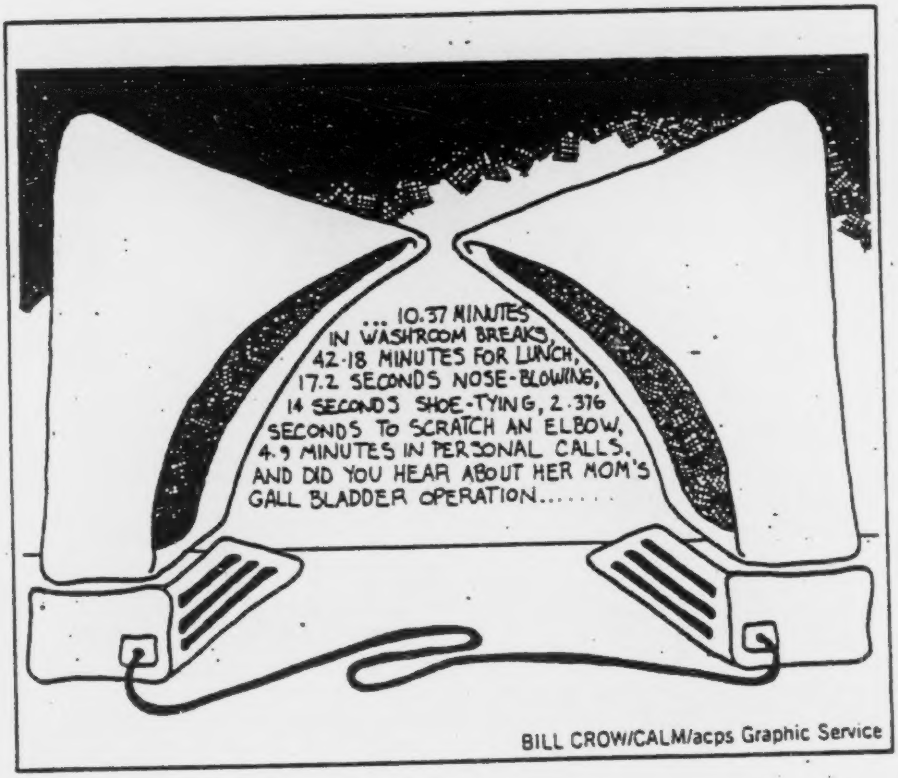
Legislation to limit workplace monitoring, like that in place in several European countries, would thwart the "initiative that can lead employees to such benefits as higher earnings," Henriques said in response to questions on the topic posed by the Bureau of National Affairs' Employee Relations Weekly.

Proposals to limit computer monitoring have been introduced in seven state legislatures in recent years though no such legislation has been adopted, CBEMA said.

Both Henriques and the association he heads have been vigorous in their opposition to legislation to establish standards for the design of video display terminals and their use in the workplace.

TNG's Collective Bargaining Program requires Guild locals to seek contractual guarantees against the establishment of speed or accuracy standards for employees working on automated equipment, including VDTs.

The Guild Reporter
Sept. 12, 1986


... 10.37 MINUTES IN WASHROOM BREAKS, 42.18 MINUTES FOR LUNCH, 17.2 SECONDS NOSE-BLOWING, 14 SECONDS SHOE-TYING, 2.376 SECONDS TO SCRATCH AN ELBOW, 4.9 MINUTES IN PERSONAL CALLS. AND DID YOU HEAR ABOUT HER MOM'S GALL BLADDER OPERATION.......

BILL CROW/CALM/acps Graphic Service

CWA News
October 1986

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BIG BROTHER
IN THE WORK PLACE

The year 1984 came and passed, and it was generally acknowledged that we have so far been spared George Orwell's nightmare vision of complete government intrusion into our homes and private lives. The technology that would make possible a real life "Big Brother" exists today, however, and it isn't stretching things too far to say that the potential of *1984* is being foreshadowed in today's Information Age workplace.

1. An MCI sales representative in the midwest phones the state wage and hour board to ask how she can file a complaint against the company to collect commission money she believes is owed her. Two hours later, her supervisor grills her about the call and smugly plays a tape of the whole conversation.

2. At Air Canada in Toronto, a female reservations agent confides to a friend at the next station that she has cervical cancer; meanwhile, a gay male agent nearing the end of his shift tells a co-worker about his planned afternoon at a nudist beach. Both are surprised at how widely known are their discrete revelations. The woman soon is consoled by her supervisor about her disease and the male is questioned about his sexual habits as he hears a tape of his statement at a performance appraisal.

3. An AT&T long distance operator is fired for "improper job attitude" when a supervisor, listening secretly to her calls, notes that she disconnects a customer. The facts as presented to the arbitrator later on: While the operator repeatedly asked the caller to put money in his pay phone, no money was deposited, he called her "a goddamn fool," and "laughing and giggling" by several people was heard from the pay booth when the secret tape was played.

These are real, and recent, cases. In the first, while MCI so far is not unionized, the worker nonetheless notified CWA which now is investigating legal action on her behalf.

In the second, the workers were reluctant to pursue action for invasions of their privacy, though they are represented by the Brotherhood of Railway and Airline Clerks, because of the embarrassing nature of the information gleaned through electronic eavesdropping.

In the third, arbitration of this case by CWA resulted in the operator's reinstatement to her job, though she suffered a two-week suspension for "violating company policy."

These are among the more dramatic examples of abuses of on-the-job surveillance, which goes by such names as "monitoring," "service observation" and "productivity measurement."

Surveillance and Stress

Less dramatic, mundane even — and perhaps most insidious of all — is the constant pressure of voice and electronic monitoring directed at three-out-of four CWA members and the growing numbers of other workers who regularly use telecommunications and computer related technology.

"Tension and stress have reached horrible levels" as a result of systematic monitoring of directory assistance operators at Southwestern Bell in Independence, Mo., according to Yolanda Tolbert of CWA Local 6321. Subjective management interpretation of intercepted operator conversations is "unfair to workers" and has contributed to high rates of anxiety, ulcers, back and neck pain, and nervous disorders among her co-workers.

"I know more service reps with high blood pressure than without," said Kevin Mulligan of Local 7777, Denver, in describing the way remote phone surveillance affects his office. While monitoring is supposed to provide "positive feedback," the workers only hear about "things we've supposedly done wrong," he says.

CWA is concerned both about the threats to the privacy as well as the health of workers who are subjected to the pressures of computer monitored work quotas. Stress and health related complaints have "increased dramatically" in CWA's ranks, according to President Morton Bahr. "We believe these complaints are related to increased job demands, decreased job controls, and the stress of electronic monitoring which often accompanies the penetration of the workplace by computers and VDTs."

Bahr directed this statement to the head of the congressional Office of Technology Assessment (OTA) after CWA reviewed a draft report of the OTA on workplace monitoring which concludes that the issue isn't one that Congress should worry about. The CWA leader urged OTA to take a harder look at the relationship between stress and disease, and he forwarded CWA's study of VDT (video display terminal) operators in North Carolina which suggests that VDT use in high pressure jobs contributes to chest pain symptoms.

Plight of the Operator

Telephone operators have been the prime focus of CWA's campaign against job pressures because they ar the most intensely monitored work group in America. From the second an operator plugs in at the start of a shift, computer equipment records the number and duration of calls han[illegible] how many keys were pressed to find directory listings, and when and how long the operator unplugs for breaks, meals and trips to the bathroom. Supervisors listen in randomly to chec a long list of performance factors including "voice impression" and "professionalism." All the while, the operator struggles to maintain an AWT (average work time) standard of so many seconds per call throughout the shift — usually between 20 and 28 seconds depending on the office.

Operators generally agree that the customers also suffer as a result of this pressure to process calls.

"If an operator spends too much time with a customer, she's in trouble, and because so little time is allowed, operators occasionally may provide the wrong number," says Annette Duncan, a directory assistance operator at Southwestern Bell.

"You feel guilty if you stay on the line — that conversation means seconds to you — so you end up withholding things that might help people," says Maevon Garrett, an AT&T long distance operator in Baltimore.

At any time, an operator may be called on the carpet because a supervisor listening in may have judged that the worker, say, used a "discourteous tone of voice." Such subjective judgements are infuriating to operators. "It's the supervisor's word against yours when the nature of the conversation is discussed later on," points out AT&T long distance operator Lanell Piercy of Downers Grove, Ill. Monitoring "harassment" results in a high rate of headaches and stomach disorders among operators, says Piercy, who is an assistant shop steward for Local 4211.

It isn't just operators who are spied on, recorded, timed and pressured among CWA's ranks. "Almost every worker who uses a VDT is subject to computer monitoring and meeting a production quota," notes David LeGrande of CWA's safety and health office in Washington, D.C. Including clerical workers both in telecommunications and in the public sector, some 400,000 members use VDT equipment, he estimates.

Among New Jersey state workers represented by CWA, hundreds of tax auditors and data entry workers in the treasury department are routinely monitored and evaluated based on computerized production records that track each keystroke. Similar methods are spreading throughout federal and state bureaucracies, reports CWA Public Worker Director Connie Bryant.

Even outside craft workers in telecommunications are being subjected to computer monitoring more and more. Some ATTIS technicians now receive assignments and punch in work reports on hand-held computers. Commenting on this "self monitoring," Bill Lewis of Local 2336 in Washington, D.C. noted: "The computer record just shows how much time you took, but later there's no record of whether you had to run all over town from one assignment to another or handle an especially difficult problem."

Inside craft workers, such as those in switching centers, routinely are subject to employers "brousing through printouts and questioning you later, and the problems you faced at the time don't show up in the record," notes Howard Barnes of Local 3806 in Memphis. "They (supervisors) use these computer records to improve their 20-20 hindsight, and sometimes you can't even remember the unique situation you are forced to explain."

Monitoring Methods Evolve

When CWA first alerted Congress to the growing menace of workplace surveillance more than 20 years ago, the methods of surreptitious monitoring described by former union President Joseph A. Beirne in Senate testimony seem crude in comparison to the management tools of today.

Beirne pointed to examples of hidden microphones in desk calendars used by telephone sales representatives, and hidden closed-circuit cameras discovered in Bell System bathrooms. He described the practice of tapping in to operator conversations, but the pervasive computer tracking of the operator's every activity and keystroke wasn't yet a technological possibility.

In 1965, CWA members were the only workers systematically spied upon and CWA was the only union voicing much concern about the matter. Today, CWA is being joined by a growing coalition of unions in calling for worker protections against the pressures and abuses of indiscriminate monitoring.

Today's computer technology allows the tracking of keystrokes and timing o output for virtually all clerical workers using VDTs and personal computers t enter data — millions of people. In some cases, supervisors can call up information on the worker's screen at will and observe on another VDT screen the work in progress.

Supermarket checkout clerks use electronic cash registers that record how many items a minute are processed, errors committed and time away from the counter.

Fiber optic TV cameras with lenses no bigger than a pencil point provide constant, and hidden, observation of many worksites (usually justified for "security" reasons).

Actual "bugging" or installing recording devices in telephones is rare today. There's no need. Technology for "remote observation," eavesdropping, on telephone conversations is availabl to employers and is considered justifiable as a means of finding out if workers are making personal calls on the job.

Laser technology developed by Bell Laboratories made the room bug or martini olive transmitter obsolete. Conversations now can be intercepted and recorded from remote sites over a distance of several blocks, and it isn't just the CIA and FBI who are using this technology.

While observation of workers in "private places" such as bathrooms is generally considered illegal, there is n outright ban and few restrictions at the federal or state level over surreptitious monitoring and recording of workers o the job. Even such actions as requiring brain-wave analysis to detect drug abuse and random search of workers' computer files is generally allowable under law.

Action to Limit Abuses

CWA for years has pushed for legislative restrictions on monitoring, and currently active union campaigns are underway in New York, New Jersey, Iowa and Michigan for laws to curb abuses and require beep-tones when workers and the general public are subjected to electronic eavesdropping.

While mobilizations for legislative restrictions led to the passage of only one state law (in West Virginia, where a monitoring bill was passed in 1982 but repealed this year after lobbying pressure from AT&T), they have often set the stage for collective bargaining gains. "Increased concern by other unions and organizations such as the ACLU should help generate public support in the future," says CWA Executive Vice President Barbara Easterling, who directs the union's government relations program.

A coalition of unions was recently formed at CWA's initiative to gather more data on monitoring and focus public attention on the issue. Other unions participating in the effort include the Government Employees, Service Employees, AFSCME, Graphic Communications, Newspaper Guild, and Railway and Airline Clerks. The AFL-CIO's Department of Professional Employees also is involved, as well as the American Civil Liberties Union.

Most progress in limiting monitoring and arbitrary productivity pressure so far has come through collective bargaining. In 1980 negotiations with AT&T, CWA won a restriction of "remote diagnostic monitoring" of operators, and in 1983 and 1986 negotiations, most contracts saw limits on use of AWT for disciplinary actions. CWA also won in several agreements an understanding that monitoring should be used for training purposes only rather than for discipline of workers.

"It's been a gradual process of tyin down contractual protections each tir we negotiate, and working to ease jo pressures on the job, every day, at th individual worksite," comments Jame Irvine, CWA vice president for AT&T Communications. "We're definitely making progress, but we have to just keep hammering away."

President Morton Bahr notes: "Our position on this issue really hasn't changed over the years. Electronic surveillance simply isn't necessary to maintain productivity and service quality, and in fact systems of gather information from customers on the quality of service have been used by the telephone industry for years and have proven quite adequate."

Bahr points out that: "The threat t the privacy and dignity of our m[illegible] is a threat to workers and citize throughout America. We have today the same philosophy that Joe Beirne articulated for CWA in 1965 — 'A fre society and unbridled eavesdroppin cannot exist in the same framework.'"

Solidarity
Oct. 1-15, 1986; Vol. 29, No. 8

STOPWATCH IN THE OFFICE

How the Union can help protect workers against office speedup.

By DICK OLSON

Time and motion studies and the stopwatch have long been used to set the pace of work for industrial workers. But today, they're being used in offices, banks, and even hospitals, as management tries to increase the productivity of white-collar workers.

And as such pressures build, the UAW, which represents thousands of white-collar members across the country, is working to insure their right to a safe and humane pace of work.

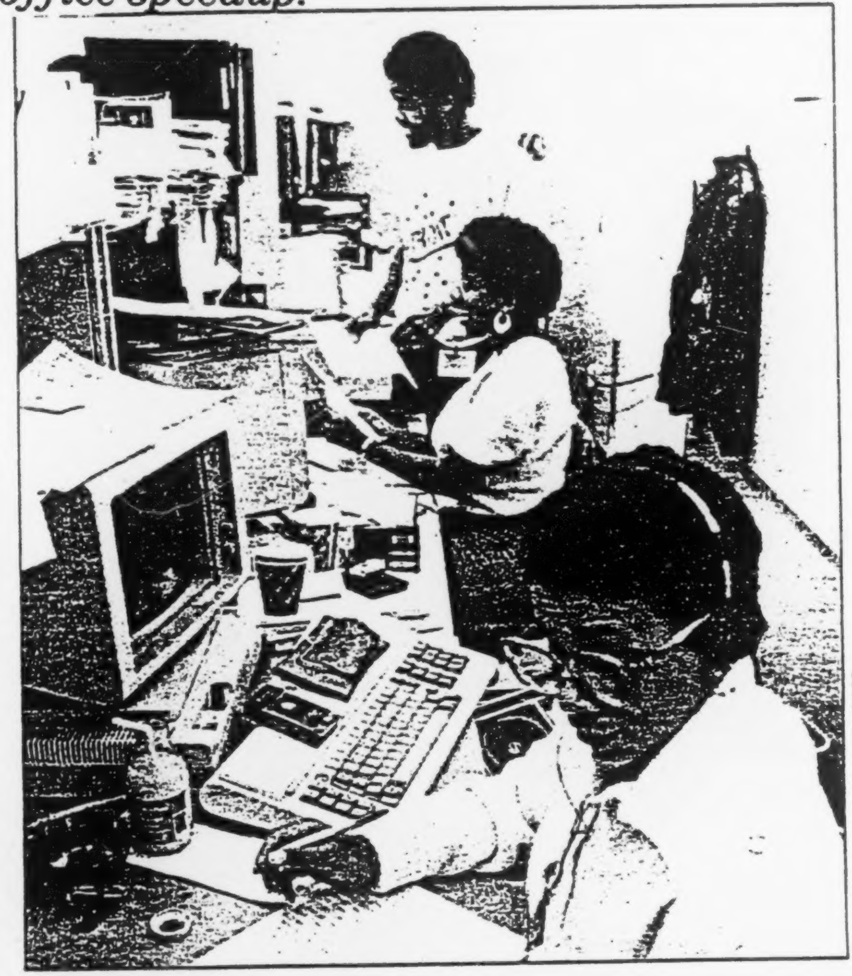
The 22-story Blue Cross-Blue Shield building in downtown Detroit, where hundreds of UAW Local 2500 members work, has been the site of one key struggle. For years before the union arrived, Blue Cross keypunch operators were downgraded in pay if they did not maintain a work standard of 12,747 keystrokes an hour. The pressure grew so intense that in 1980 over a hundred keypunch operators walked off their jobs one afternoon in protest. That was over a year before they joined the UAW.

Today because of UAW contracts, that standard has been eased. Not only keypunchers, but many other kinds of office workers have been helped by union intervention, says Prudence Humphrey, a trained union time-study representative—the first in a white-collar local in the UAW and likely in the country.

Humphrey's tasks include using her skills and the resources of the UAW's Time Study and Engineering Dept. to help workers win relief from unrealistic production standards, to assist them in learning how to properly report their productivity, and to challenge management errors.

Drawing on long experience and expertise in the blue-collar area, today the UAW is virtually writing the book on how unions can represent office workers faced with the challenge of production standards.

The union's role begins with negotiating fair standards based on the UAW's philosophy that workers should put in a fair day's work for a fair day's pay. When management demands more, union intervention is needed.



SOLIDARITY PHOTOS BY RUSS MARSHALL

COMPUTER AS BIG BROTHER: One of the major challenges facing workers as well as their unions is the increasing use of computers to measure work productivity. For Betty Kimbel, also a Local 2500 member, such practices mean that all the time she spends answering telephone inquiries, a computer system keeps track of her time at her desk, the length of her calls, the number of seconds between calls, and the number of calls she handles.

"If the telephone representatives wait more than 30 seconds between calls on a busy day," she says, "they can be disciplined. And if you have just been dealing with an angry or rude customer, sometimes it's difficult to compose yourself for the next call."

A few floors away, Dorothy Ward almost wishes she had an impartial counter measuring her work as she enters claims data into a computer. She's supposed to enter 81 an hour, but sometimes they're one line long and sometimes six. "By the end of the day," she sighs, "I am exhausted."

Customer-service representatives at Blue Cross also are measured for productivity. If they don't make 95 percent of their rate in a job that calls for

continuing good judgment and accuracy, they can be disciplined."

It's these kinds of problems that the UAW seeks to address in its role as protector of workers' rights. Prudence Humphrey says that when a worker can't meet his or her standards, the problem sometimes is because the worker had never been taught the right method or how to properly count all the work he or she is doing. Investigating one disciplinary case, Humphrey found that the worker had not been giving herself credit for reordering data. "When she did, she met her standard," Humphrey recalls.

ALIENATION: Humphrey believes that work standardization can alienate workers from each other as well as from management. But there is no doubt that management will keep up its efforts to get the most production it can out of workers. And unions will have to be as vigilant in the white-collar sector as they have been in blue-collar fields.

"Clearly the measurement and improvement of white-collar productivity is one of the single largest challenges facing our economy today," says Chester L. Brisley, a retired productivity engineer.

Such messages are being spread into banks, hospitals, and into every department of modern industrial corporation.

At Hughes Aircraft, for example, a company recently purchased by General Motors, management decided that "if we can measure our project coordination function, we can measure anything." At the end of its study, the company claimed success and reduced the project coordination staff 38%.

As corporations redirect their attention and their work-measurement specialists to clerical and service industry settings, "They seem to be repeating many of the same mistakes made with factory production workers," warns John Zalusky, an AFL-CIO specialist. "It is important that unions representing white-collar workers learn from labor's earlier experience."

Today, white-collar workers account for nearly 53 percent of the adult workforce and nearly $1 trillion in annual compensation. That could rise to $1.5 trillion by 1990.

DRESSING-UP SPEEDUP?: One hundred years ago, when Frederick Taylor first introduced time study techniques to industry, the American Federation of Labor won legislation prohibiting the use of stop watches in federal industrial establishments.

But the approach didn't work. Unions concluded that, like them or not, time-study systems weren't going to disappear. So labor began to develop the expertise to counter claims of management, and "to knock the props from under elaborate time studies which were in reality only dressed-up speedup," as described by former UAW President Walter P. Reuther.

In 1948, the UAW set up a Time Study and Engineering Dept.

"We don't believe time study is scientific fact," says Tom Cichocki, who directs that department today. "But we can only represent our members if we understand how it works."

Now, training courses in time study for UAW members go on continuously. While Prudence Humphrey received her training at a private institution, the UAW recently held its first time-study training course for white-collar members—all union officers from Blue Cross-Blue Shield offices outside Detroit. As white-collar work becomes an increasingly important part of the economy, the union will continue to perform its job of protecting workers against speedup and other arbitra management practices.

The Guild Reporter
October 17, 1986

'SNEAKY' TACTICS SCORED

Monitoring methods seen as hinderance

Washington—While electronic monitoring of employees' performance could play a key role in management efforts to improve productivity, current methods are counter productive, an academic panel has concluded.

Employees feel frightened and pressured rather than motivated by monitoring systems, according to a report prepared for the congressional Office of Technology Assessment. In that report, Dr. Michael J. Smith of the University of Wisconsin's Dept. of Industrial Engineering and a pair of colleagues cite the failure of today's computer-based monitoring techniques to measure quality of work along with quantity.

"Those few electronic monitoring systems that do examine quality" use such "objectionable, sneaky" approaches that they serve "as a demotivator to workers rather than as a source of helpful information," the panel's report said. It cited, as examples, unannounced eavesdropping on telephone solicitations and counting corrections in typed material.

The panel drew its findings from published research in the area as well as its own survey of 41 employees at five work sites, including classified advertising employees at the New York Times the St. Paul Dispatch and Pioneer Press.

The congressional agency commissioned the report as part of an exploration of the need for legislative action in response to the growth of electronic monitoring in the workplace.

TNG, along with a number of other unions, has participated in OTA discussions on the phenomenon.

The Smith panel reported that newspaper respondents were unanimous in their dislike for the practice of supervisors eavesdropping on telephone calls, and noted that "there was much resentment of the entire monitoring system" among the employees.

Controlled access to feedback from the system was a source of conflict between classified employees and management, the report said, adding that employees would prefer to review the machine's inventory of the number and duration of their calls at their own discretion rather than at specified times designated solely by management.

A log of the time, frequency and duration of calls, as well as time away from the system for breaks or other interruptions is provided to employees at intervals during the day and a printed performance report on each employee is provided to supervisors at day's end, the report said.

All employees who participated in the survey, however, indicated that computerization made their jobs easier and helped them work more efficiently, although most respondents said the monitoring system did not enhance their performance.

Eighty-nine percent of the respondents felt monitoring made their work more stressful and 80 percent said it interfered with communication with co-workers. Monitoring reports were considered accurate by 82 percent of the participants, but 60 percent believed the data did not produce an adequate picture of their job performance.

Whether monitoring can affect workers' health is unclear, the report said, cautioning that the increased job stress and reduced job satisfaction associated with the improper use of monitoring has "the potential to be a serious threat to worker health." A further examination of health consequences should be undertaken, the report said.

Monitoring designed to provide employees with "accurate, meaningful feedback" about job performance in a "non-evaluative" manner can be an important part of a program to motivate employees, the researchers said, adding that any successful program "must be perceived as fair by the employees."

Warning of the danger of infringing on individual rights and dignity inherent in any electronic monitoring system, however, the report urged Congress to consider limitations on its use in such areas as disciplinary proceedings, payment systems and performance reports. Monitoring should not be used as the basis for discharge, the report suggested, urging further study of the impact on workers.

The report also called for research into the development of new tools and methods of measuring both quality and quantity of performance, including new hardware and software that can provide workers more useful information.

CWA News
November 1986

For Operators, the Big Issue Remains

STRESS

Take three hundred telephone operators from around the country, put them together for three days to discuss mutual problems, and one theme keeps boiling up again and again — job stress.

The fifth annual CWA Operator's Conference, held late last month in Phoenix, focused not only on such long-standing concerns as AWT (Average Work Time measurement) and voice monitoring but also addressed new stress-provoking problems resulting from the Bell System breakup and deregulation of the industry; problems such as:

- Dislocations and disruptions associated with "reprovisioning" — the shifting of thousands of AT&T Communications operators back to the Bell operating companies (BOCs) as part of the divestiture process.
- New forms of sales-oriented work appraisal that are being applied unevenly and sometimes subjectively to operators in response to competitive pressures.
- The loss of non-contractual local work rules and privileges in many offices where former BOC operators were moved to ATT-Com.

AT&T Officer on the Firing Line

AT&T's new Vice President for Operator Services Paula Lance Gavin heard anger and frustration in many questions fired at her during an intense two hour give-and-take session. Gavin, who pledged that her "Number one priority is people," was praised by several participants for her candor and for being "a sport" to subject herself to the experience.

Nonetheless, Gavin was a handy target of abuse for AT&T's tough stance during the recent negotiations and 26-day strike. Questioned about AT&T's national newspaper ad during the strike, which a CWA member charged was "a distortion," Gavin responded that, "I didn't write it, and if I had it might have been different."

Several participants described "preferential treatment of scabs" by managers since the strike and pointed out that this practice undermines Gavin's stated goal of building "a team" within AT&T operator services. Gavin said such behavior would be against her policy and promised to investigate the charges in the cited locations, Houston and Akron.

Questioned about the loss of such customary privileges as advance posting of tentative holiday schedules and certain paid break periods that existed in various offices before BOC workers were shifted to ATT-Com, Gavin replied: "We may want to go back and have every office use the rules they had before (divestiture). We're going to work on that together," she said, indicating she was discussing these problems with CWA's James Irvine, vice president for ATT-Com.

Irvine, appearing with Gavin, also noted that, "The bargaining process never really has ended. The task of merging all the BOC contracts into one (CWA-ATT-Com) contract is very complex, and we're still ironing things out."

AWT — Still the Hot Issue

AWT, by that name or any other (such as the new "Performance Development Plan," PDP) remains the telephone operator's biggest complaint. Virginia Iverson of Local 7200 in Minneapolis voiced the feeling of thousands of CWA members in the session with AT&T's Paula Gavin:

"AWT's have been a sore spot in operator services for years. No matter how fast you are, the supervisors always want more from you. Our standard in Minneapolis was 96 ten years ago. The theme of the company today is customer satisfaction — yet our standard is still 96. You can't have your cake and eat it too! We can't give customers good service until we get a more realistic average to work with."

Kevin McDermott of Local 7777 in Denver pointed out that the new PDP job performance program, which measures AWT along with other factors that supposedly take into account customer service, such as call completion, isn't popular in his office:

"The performance development appraisal system has great potential for abuse because of the subjective way it is applied by management. It's administered differently in every office."

He said, "There is every reason to believe there is overmonitoring going on" to measure PDP performance.

Gavin, in defending the system, asked how many operators now worked with PDP. About 50 hands went up. Then she asked how many liked the system. No hands went up. The room exploded in applause and Gavin scribbled another note on her legal pad.

Bahr Warns of 'Sales Quotas'

The new performance standard also was addressed by CWA President Morton Bahr, who spoke to the operators and answered questions on the final morning of the conference. Bahr warned that operators may face the pressures of "sales quotas" as the companies seek to measure the revenues gained by each operator's performance.

"There's a simple reason for this and it's called the bottom line," Bahr stated. "The operator represents a $5 billion a year business. Americans place and receive 190 billion calls each year.

"When we struck last summer, where was the first place management scabs were assigned? Operator Services," Bahr noted.

"AT&T's 'Revenue Management Program' is being expanded to include operators," Bahr said. "They are proposing that operators visit with customers, document visits and become a personal point of contact with customers — all at no additional pay, of course."

The conference later adopted a policy resolution noting that "the linking of operator services and marketing preordains that operators will be saddled with sales quotas as well as AWT's," and which concluded: "In order to achieve realistic and fair productivity standards they must be established through joint consultation with the union."

Erasing 'Big Brother' from the Workplace

Monitoring, another source of operator job stress, was also a major concern throughout the conference and the subject of Resolution Number One — "Erasing Big Brother from the Workplace."

President Bahr pointed out that monitoring — surreptitious electronic eavesdropping — in the sexist parlance of telephone management years ago used to be considered "a female problem," and wasn't taken seriously. "Well, management was having the female problems," Bahr stated. "They were also having male problems, worker problems, and eventually CWA problems."

Bahr described how CWA has addressed the problem in bargaining and has moved into the forefront in making this "a worker rights issue for all workers."

"Your union has taken the lead in formation of an ad hoc working group on monitoring with other AFL-CIO unions," he reported. "We are exchanging experiences and ideas for advocating workers rights issues in the Information Age workplace. And we're realizing that along with monitoring, polygraphs, brainwave testing, mandatory drug testing and computerized supervision and production controls are all part of the assault on workers rights."

The conference-passed resolution on monitoring concluded that CWA must "vigorously pursue legislation at the national and state levels to eliminate and finally outlaw monitoring of all types."

Other Speakers, Resolutions

Other speakers at the conference, organized by Phoenix Local 7019 with support from other District 7 operator locals, included:

- Outgoing Arizona Governor Babbitt, who presented his proclamation designating Oct. 29 as "Arizona Operator Services Day."
- Carolyn Warner, the CWA-endorsed Democratic nominee for Governor of Arizona (who narrowly lost election a few days later).
- CWA Executive Vice President Barbara Easterling, who heads CWA's government relations department. She reviewed developments affecting operators and other telephone workers flowing from the Congress, Federal Communications Commission and the courts.
- Dina Beaumont, executive assistant to Bahr, who stressed that activists at the conference "must become knowledgeable about the issues" in today's workplace, continue to "network" and share information, "and go back and get other workers and groups involved in solving the problems we're discussing here."
- District 7 Vice President Walt Maulis, who welcomed the participants to his district, and was on hand throughout the meeting to review operator service job issues and problems.

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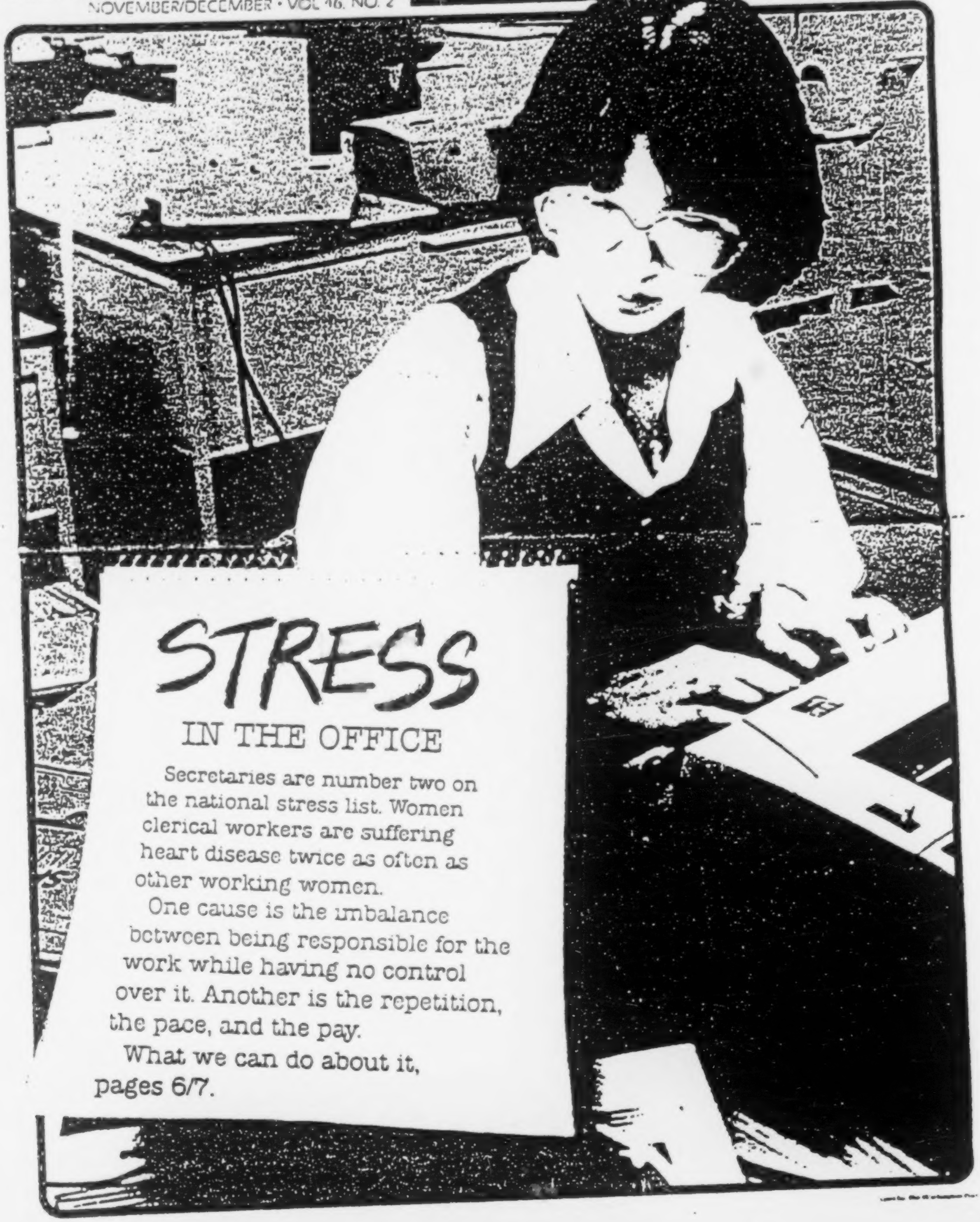
For many SEIU members 'goodwill to all' may take special meaning this year/p. 2



STRESS
IN THE OFFICE

Secretaries are number two on the national stress list. Women clerical workers are suffering heart disease twice as often as other working women.

One cause is the imbalance between being responsible for the work while having no control over it. Another is the repetition, the pace, and the pay.

What we can do about it, pages 6/7.

[illegible]

Service Employee
November/December
Vol. 46, No. 2

The secretary's job was once full of challenge and variety and human contact. But all that has changed since the VDT was brought to her office. Now she spends hour after endless hour—straining eyes, back, and wrists at the terminal—trying to meet her computer-monitored production quota. All the while, a message she isn't even aware of is flashing on her screen: "Work faster."

CLERICAL CONVENTION

For the 'office, of the future,' SEIU has its own ideas about progress

Local 585 president Rosemary Trump chairs the convention (below), where delegates ponder new ideas for organizing and bargaining (bottom), and hear from SEIU's District 925 president Karen Nussbaum (bottom right) on what the future holds in store for office workers. photo by Michael Murphy

This is the office of the future. And the delegates who came to SEIU's first full convention of the clerical division caught more than a glimpse of it.

"We're up against a technological tornado that is tearing through the office landscape," SEIU president John Sweeney told the delegates.

They were a group of union officers and rank-and-file members, men as well as women, from the U.S. and Canada representing 125,000 office workers in universities, government offices, schools, hospitals, insurance companies, and utilities.

But for all the diversity in their backgrounds, the delegates shared an apprehension about the future.

A clear picture of the changing office and its impact on work, health, and family life emerged as they listened to experts from SEIU, universities, and other institutions.

Today, office workers are producing more and more work on new high-tech equipment that requires new and more complicated skills. And the work is physically demanding—straining the eyes and the body to the point of sheer exhaustion.

DEAD-END JOBS

But "some things haven't changed much since I began organizing office workers twenty years ago," said division chair Rosemary Trump, president of Local 585. "The low pay, the heavy workloads, the dead-end jobs."

In fact, as automation leads to more "clusters" or "pools" of office workers, their career paths are cut short and their paychecks get smaller.

"We're living through the greatest non-bloody revolution in history," safety expert Dr. Jeanne Stellman said, referring to office automation. "And it's intimately related to our health."

Now more than ever, stress is a real and threatening health hazard in the workplace. And when it

parents, stress adds to—and feeds off of—pressures at home.

"We need to challenge management's monopoly on the development of the technology itself," District 925 president Karen Nussbaum told the delegates. "Technology should be used to create satisfying and plentiful jobs, not more control over the workers."

Mary Murphree, a former secretary who is now head of the New York State Women's Bureau, calls office work the "silent occupation."

"But the 'silent' worker is now finding a voice through SEIU," she said.

It's no surprise that SEIU has earned the reputation as the union for office workers.

Sweeney summed it up best with a list of SEIU's achievements: "Our innovative District 925 national organizing program; "our coast-to-coast bargaining for pay equity and career paths and control over office automation; "a pioneering lead on issues like VDT safety; "our overall encouragement of women's leadership."

PIONEERING LEAD

SEIU has much more on the drawing board, said Sweeney. On the agenda are plans to close the wage gap between men and women, make automated offices safe for workers, demand more opportunities for career advancement, and solve the problems of working parents. SEIU will vigorously pursue parental leave, child care, and better health benefits, he promised.

As clerical-division director Jackie Ruff explained, the agenda for office workers will be accomplished through organizing, bargaining, and the public policy-making arena.

So far, only one office worker in eight belongs to a union. So during the busy two-day convention, followed by a day-long health and safety seminar, the delegates hammered out some new ideas for organizing.

They left the convention full of new plans—to survey their members on stress and other health issues, map out campaigns to win public support, and get more members involved in

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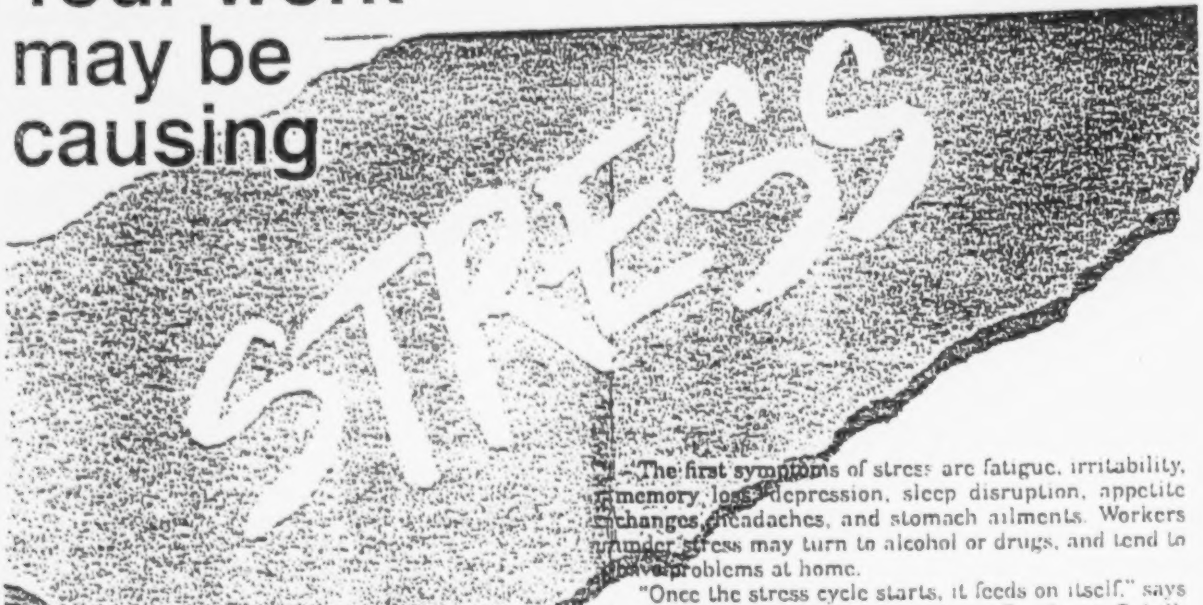
Your work may be causing



Corporate executives and physicians don't suffer from the condition. But office workers do. It's stress, and it's coming to light as a serious occupational health hazard.

As the incidence of heart disease rises rapidly among working women, more research on occupational stress is being conducted by such groups as the National Institute for Occupational Safety and Health (NIOSH) and the Centers for Disease Control (CDC).

And the results are coming in—stress is real, life-threatening, and caused by *factors in the workplace*.

"Stress is not a personal problem," says Dr. Jeanne Stellman. "It's environmental, and it needs action."

What ingredients make up a stressful job? Heading the list are a heavy workload and lots of responsibility, particularly when accompanied by *lack of control* over the work—and lack of respect, recognition, and support from supervisors. Even worse is when the work is repetitive and fast-paced, the work environment noisy and poorly-ventilated, and the worker under-paid and dissatisfied.

No wonder, then, that secretaries are number two on the "stress list"—the NIOSH ranking of 130 occupations—second only to laborers. But because of automation—which speeds up the pace and takes out the challenge—office workers are gaining ground on the number one spot. In fact, another NIOSH study shows that clericals working on video-display terminals (VDTs) have more stress than any other worker.

Stress is marked by real, physiological changes that occur in the body, in response to demands made of it in the office. The stress reaction, sometimes called the "fight or flight" syndrome, charges up the body's sources of energy—adrenaline, heartbeat, cholesterol, blood sugar, and blood to the heart and brain. These changes, occurring all day long, take their toll.

The first symptoms of stress are fatigue, irritability, memory loss, depression, sleep disruption, appetite changes, headaches, and stomach ailments. Workers under stress may turn to alcohol or drugs, and tend to have problems at home.

"Once the stress cycle starts, it feeds on itself," says psychologist and SEIU consultant Dr. Janet Cahill. "That's when stress becomes very serious."

Heart disease, the major cause of death in the U.S., has been clearly linked to stress. A well-known study in Framingham, Mass., shows female clerical workers are suffering coronary heart disease about twice as often as other working women.

For its part, the CDC recently confirmed that while "relaxation" or "stress management" may help, it is far more important to get to the root of the problem in the workplace.

By organizing, office workers are gaining a voice in office decisions and alleviate some of the job stress.

And SEIU is fighting job stress in a number of ways. For office-worker members, SEIU locals are eliminating job dissatisfaction by bargaining for equal pay and career ladders. They are bargaining for rest breaks and proper work-station design for VDT operators. And they are negotiating for reasonable workloads, child care and parental leave, and other improvements in the quality of the office worklife.

SEIU locals are also taking some new approaches to job stress, often in labor-management cooperation or a union-oriented "quality-of-worklife" committee.

In many cases, the union starts with a scientific survey of stress among members. A survey of Pennsylvania state welfare workers last year armed Local 668 with an explanation for excessive absenteeism, which they used to fight demands for sick-leave concessions.

Using outside professional help, some local unions sponsor stress-counseling services for their members. California Local 790 is conducting workshops in which stewards learn to identify and treat the causes of stress in the workplace.

"It's amazing how many workers think their stress is individual, and caused by a 'personality conflict' with the supervisor," says Local 790 steward Aneta Cowgill. "Until they hear how many of their co-workers also have personality conflicts."

TRENDS in the office lead to less satisfaction, less pay for workers.

How will we feel about our work in the office of the future? Karen Nussbaum, District 925 president, thinks that's a valid question.

"Office workers are becoming the 'lonely workers,'" she says. In automated offices, people don't communicate with people, only machines. Of all the dangers associated with office automation, Nussbaum believes social isolation may be the worst.

But it's certainly not all that employers have in store for workers in the office of the future.

- **Computer monitoring**—By far one of the most sinister developments, new technology is allowing managers to keep tabs on office workers like never before.

Computers can prompt workers to work faster and warn them when they fall behind production standards. And managers can use computers to exert more control over workers' minds by flashing subliminal messages through their terminals and listening in on their telephone conversations.

- **"Marginalization"**— A growing practice of hiring part-time and temporary workers chip away at the base of full-time office jobs, says a new study by 9to5, National Association of Working Women.

Employers claim these "marginal" jobs are good for working parents, but in reality they are good for employers. Part- time and temporary work pays much less per hour than full-time jobs, and typically provides no benefits.

- **Clerical homework**—With the help of a personal computer, or a terminal linked to a mainframe via the telephone, office workers can do bulk word processing and the like at home. It appeals to some workers, but the employers make out like bandits.

They save not only on overhead and equipment costs, but also on the "piecework" rates they pay the homeworkers and the benefits they stop providing them. Only by working extraordinary hours can homeworkers come close to earning what workers earn in the office.

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SEIU members speak out on STRESS

Computers do it all —like it or not

> "Automation just evolved…. It took the challenge out of the job."
> —MARY LOUISE GARRO

"Some people seem to enjoy working with computers," says Mary Louise Garro. "But I find it demoralizing to see the computer do what I used to do."

In the fast-growing city of Fremont, California, Garro is a senior account clerk in the payroll department and a member of Local 790. She and only one other person process paychecks for more than 750 city workers.

That alone is a heavy workload, Garro says. But she also interprets provisions in 12 different union contracts—an overwhelming task.

In the six years she has worked for the city's payroll department, Garro's job has never been more stressful than it is now.

"The automation of my job just evolved," she says. "I don't like it, but I never had any choice."

The machines take the challenge and mental stimulation out of the job, she says. Instead of doing the actual accounting herself, she simply records the information and looks up the computer codes.

And she dreads the four or five days each month she spends doing solid data entry at a terminal for the entire eight hours.

Photo by [illegible]

Mary Louise Garro

It's so physically draining that when she goes home, her eyes and head ache for hours. But because the work is so monotonous, she says, the mental fatigue is even worse.

Because the city's employment has gone up by one-third since she's been there, Garro says, no one fears losing their job to automation. But knowing that eventually even more of her time will be spent on the computer does make her apprehensive.

Garro, a shop steward, knows that many of the problems she and her coworkers face on the job are not always grievable under the union contract. But she also knows that it helps if workers have more input into decisions that affect their daily worklives.

After attending a workshop, as part of Local 790's new stress counseling program, she is exploring new ways of dealing with work-related stress. And management, she believes, recognizes it is to their advantage to listen to what union members have to say.

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> “When I get home, I don't want to hear anyone else's problems.”
>
> —DENISE SOUSA

"Why do you punish us today when you let us get away with it yesterday?" Denise Sousa's two young daughters want to know.

The reason, Sousa readily admits, it that she had a bad day at work. "You take it home with you," she says.

Sousa has been working for Cambridge and Somerville (Mass.) Legal Services, Inc., for two years. She is a member of SEIU District 925, which represents the firm's clerical workers.

A typical working mother, Sousa juggles responsibilities at work with those at home—which is why she depends on her union contract. She says it gives her the flexible hours she needs, defines reasonable workloads, and enabled her to be promoted from receptionist to intake worker.

All day long, Sousa screens calls from people who need free legal services. If they do not qualify, Sousa is the one who has to tell them—a job she doesn't relish. But most of her day is spent setting up files, filling out complicated forms, photostatting, indexing, coding, and—until she became pregnant—entering the data into a word processor.

Sousa is bilingual, and she translates Portuguese documents under stringent deadlines. The translations are one of the most stressful parts of her job. She is the only one who can do it, and the attorneys expect her to drop everything when they need it.

At lunchtime, Sousa drives nearly a half-hour each way to pick up her youngest daughter and bring her back to work. There's no one at home to take care of her, she explains.

"It's a crazy life," she says. "My day has to be timed perfectly."

Sousa is diabetic, and her blood sugar level goes way up on particularly bad days. And though her doctor has told her the stress is causing it, she says she doesn't want to look for another job.

"This is a job where I can help other people," she says.

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Handling a big job with little control

> “I just keep reminding myself I do something worthwhile.”
>
> —CHRISTINE ENRIGHT

Christine Enright still remembers the names—and the children's names—of clients she had ten years ago.

Now, increasingly overworked, she is hard-pressed to recall a single client she had last month.

"It's become depersonalized," she says of her job as a case worker in Philadelphia's inner city. "I'm responsible for how people will live. But I feel like a billing clerk."

Every month, the Local 668 member determines the eligibility of 300 families for food stamps, cash, and medical assistance. And since state funding has been drying up, the case workers are severely understaffed.

"It's a huge responsibility," says Enright. "With absolutely no authority or decision-making." They go by the regulations and procedures contained in three "monstrous" volumes and several binders full of procedural changes, which appear daily.

The telephone rings all day long, and in between calls Enright processes lengthy forms, cross- references, checks, and a multitude of what she calls "boring details."

Most of the case workers, she says, have to pick and choose which deadlines they are going to meet.

"I try to be pleasant with the clients," Enright says. But she says she feels angry all the time, and sometimes she just wants to scream.

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Her stomach has gotten "really bad" over the years. And she says she can't figure out, since she has to get up early in the morning, why she can't

fall asleep until late at night.

Last year the union surveyed the case workers in Pennsylvania, and found a high level of stress-related illness. Now Enright chairs a statewide committee of case-worker representatives, to work on ways of dealing with the stress. As a first step, they managed to equalize the workloads.

But even better, says Enright, is the chance to discuss regulations that stopped making sense long ago.

photo by LCR Photographic

Christine Enright

UFCW (United Food and Commercial Workers)
November/December 1986

Employee Surveillance, Monitoring Increasing

Drug testing is one aspect of a growing trend toward businesses playing "Big Brother" in the workplace. Employee surveillance and performance monitoring have become increasingly prevalent in recent years as the availability of sophisticated electronic equipment has enticed many companies to step up efforts to spy on employees.

Computers are a key culprit. The International Labor Organization's 1985 report on technological advances in the workplace observes, "The tremendous advance in computer technology has substantially contributed to developing [employee] control techniques. Personnel control . . . has become far more efficient."

Computers are used to count keystrokes per second, record restroom visits, and in some cases are programmed to listen to employee telephone conversations, a study conducted by 9 to 5, the National Association of Working Women, reveals. About two-thirds of the 13 million video display terminal operators in the U.S. are monitored, according to estimates by the National Institute for Occupational Safety and Health.

In grocery stores, laser scanners can monitor how many items cashiers scan per minute. Computers monitor how quickly airline reservation clerks enter information and how long they pause between calls. A number of major American corporations, notably long-distance telephone companies, routinely listen in on employee telephone calls.

Employee monitoring causes high stress and low morale among many workers, experts note. Karen Nussbaum, director of 9 to 5, sums up the feelings of many workers, stating, "The potential for corporate abuse is staggering. It puts you under the gun in the short run and drives you crazy in the long run."

COMPUTERWORLD DECEMBER 22, 1986

Limiting worker information abuse

Ron Schneiderman's article, 'Employee productivity: Big Brother is monitoring you" [CW, Nov. 10], misses the heart of the matter in dismissing worker objections to computer monitoring.

Computer operators being electronically surveilled are much different from sales representatives, who fill out reports, or football players coached from the sidelines, as Schneiderman disingenuously draws the comparison.

With the computer, workers can be watched every fraction of every second of their workday. More information, in greater detail, can be collected than ever before. The potential for abuse is obvious.

Schneiderman notes that the product of monitoring is information, and he raises important questions: How important is the information? How relevant is it? Does it truly reveal the quality of the work being performed?

In far too many cases, managers collect far too much information, without the employees knowing what is being collected or how it is to be used. To limit these potential abuses, 9 to 5, the National Association of Working Women, suggests the following:

- Ban the use of subliminal software programs.
- Notify workers when auditory, visual or computer surveillance occurs.
- Allow employees complete access to their personnel files and provide them with information on how the data is collected and used.
- Establish a grievance procedure so employees can appeal incorrect data, since the computer is not always right.

In order to start out with the best foot forward, statistics should be collected by work group, rather than by individual worker. Productivity standards or work quotas should be set with employee input to reflect system problems, such as downtime and response lags, quality of service and work load variability.

These are just a few ways to prevent some of the worst abuses and give employees a minimum of protection until, in Schneiderman's words, employers can "figure out what information is really worth and can evaluate its timeliness."

Karen Nussbaum
Executive Director
9 to 5
National Association of Working Women
Cleveland

Item 5

The Boss That Never Blinks

Companies put workers on the spot by using computer supervisors

So you think your boss is inhuman? A real automaton who never lets up, never forgets the slightest error you make? Then just wait until a computer takes over as manager.

For many U.S. workers, that day has arrived. In nearly any job in which computer terminals are a tool for workers, and that is a lot of jobs in today's economy, the machines now have the capability of monitoring an employee's performance. Result: millions of computer users are toiling under the relentless gaze of electronic supervision. In thousands of U.S. offices, stores and factories, workers who once could get away with goofing around can be seen hustling through their tasks as though the bosses were watching them every minute.

Of course, that is exactly the idea. Major corporations ranging from United Airlines to Equitable Life have installed monitoring systems for some employees in the hope of boosting productivity. More than 13 million Americans use computer terminals in their jobs, and about one-third of these people are being scrutinized as they work. Since the number of terminal users is expected to triple by the end of the decade, computer monitoring may be on its way to becoming the next big management buzz word.

The exact technique depends on the job to be supervised, but monitoring requires only the installation of specially written software into the central computer that handles the work of many individual terminal users. Thus equipped, the master computer then will not only process information from each employee's terminal but also measure, record and tabulate dozens of details about how efficiently the worker is putting information into the machine.

Airline-reservation computers, for example, closely measure how long individual clerks take to handle each customer and the amount of time the employee spends between calls. The computer takes note of any idle moment and measures lunch hours, coffee breaks and even trips to the bathroom. At grocery stores, optical scanners not only ring up prices but also tell a central computer how many items per minute the clerk is handling, as well as other information. Even in factories where employees operate complex electronic machine tools rather than keyboards, computers can monitor the equipment and alert management about slow or absent workers.

Instead of supervising the old way, by peering over an employee's shoulder from time to time and trying to guess from observation how well the subordinate performs, a manager can now simply look into a worker's computer dossier and immediately see, for instance, an exact record of how many letters a week a secretary has been handling on her word processor. The manager can compare one worker objectively with all the others, then reward the speedy ones and warn the laggards. Not all employees find the surveillance oppressive. In fact many, particularly the hardest workers, prefer the new evaluative technique because they see it as a matter-of-fact measurement of their output as opposed to a boss's personal opinion. Says R. Douglas MacIntyre, a senior vice president of Management Science America, which develops monitoring programs: "We are letting management make better, quicker decisions based on facts, not emotions."

Despite those benefits, computer supervision has a dark side that is becoming a major issue for workers, labor leaders and scholars. The ability to record so much information about an employee could tempt managers to snoop too deeply into personal behavior and invade privacy. Just as ominously, the pressure of being monitored every second is already producing undesirable side effects in some workers, notably high stress and low morale. Declares Karen Nussbaum, director of 9 to 5, a national group of workingwomen: "The potential for corporate abuse is staggering. It puts you under the gun in the short run and drives you crazy in the long run." Tales of computer bosses have already become part of labor folklore. When the New York *Times* installed a software system to monitor the performance of its clerks who take classified ads over the telephone and type them into terminals, some employees donned buttons that read, BIG BROTHER IS WATCHING.

Fearful of a backlash, corporations

tend to be hesitant about describing the inner workings of their monitoring programs. Says Barton Reppert, publisher of *Office Health & Safety Monitor*, a newsletter: "Many companies won't say anything in detail about it. It's a very sensitive area." Companies with thousands of workers doing repetitive jobs tend to operate some of the most stringent monitoring systems. At Pacific Southwest Airlines offices in San Diego and Reno, the master computer records exactly how long the 400 reservation clerks spend on each call and how much time passes before they pick up their next one. Workers earn negative points for such infractions as repeatedly spending in excess of an average 109 seconds handling a call, and taking any more than twelve minutes in bathroom trips beyond the hour a day they are allotted for lunch and coffee breaks. Employees can lose their jobs if they rack up more than 37 points in a year.

PSA, after using a more relaxed monitoring system for the past six years, imposed the point system last March. The tension immediately went up, workers claim. One PSA clerk, Judy Alexander, a 14-year veteran, took a disability leave last month after compiling 24 demerit points. Says she: "You're a nervous wreck. The stress is incredible." Observes a fellow clerk and local union official, Toni Watson: "It's a very oppressive way to work. To be plugged into that boob tube and not be able to move gets under your skin sometimes." PSA defends its system as a productivity booster and says it is no more severe than the monitoring at other airlines.

One of the first industries to use computer monitoring in a big way was the telephone business. Operators at AT&T now handle 600 to 700 customers a day, compared with 150 calls during the early 1970s. The difference, contends Charles Thornton, AT&T's director of operator services, is that automation has made each call easier to handle. Employees, however, say that computer supervision requires machinelike performance from them that takes no account of their personal ups and downs. Says one eight-year veteran: "If I'm ever slow, the company will know. It means I can't have a bad day."

"The potential for corporate abuse is staggering. It puts you under the gun in the short run and drives you crazy in the long run."

Computer supervision has made inroads in other businesses as well. At a Ford Motor plant in Batavia, Ohio, computers keep a running record of each employee's absences. Perfect attendance for a year can bring a prize of $500. Industrial companies have been less inclined than service firms to impose stringent computer monitoring of employee work. Tradesmen and other blue-collar workers tend to be highly resentful of automated supervision and frequently find ways to circumvent or sabotage it. Harley Shaiken, associate professor of labor and technology at the University of California at San Diego, tells in his 1984 book *Work Transformed* that in one particular factory, workers learned to fool the computer monitor by leaving the motors on their machines running even when the operators were away on extended coffee breaks. In the end, though, the computer caught up with them by detecting that the idling machines were using less electricity than normal.

The move toward monitoring has ignited a boom for companies that produce the necessary software. A Utah-based firm, Clyde Digital Systems, makes a program called AUDIT that records every single keystroke by a terminal operator. "It permits total surveillance of all users, all of the time," boasts company President Allan Clyde. Some software is more manipulative, according to a report on computer monitoring issued last April by the 9 to 5 group. One such program berates workers with messages that say, "You're not working as fast as the person next to you."

"Not only will they see who's calling dial-a-porn, but also who's calling a union organizer, or the newspaper."

Since monitoring provides an exact measure of a worker's productivity, several companies have combined the technology with pay-for-performance programs. At Automatic Data Processing, a New Jersey computer-services giant, data-entry typists who work efficiently can boost their salaries by as much as 40%. An employee typing 18,000 keystrokes an hour—or five per second—earns a top pay of $20,000 to $24,000.

Such incentives motivate many employees, but others view computer monitoring as a throwback to 19th century sweatshops, where workers were paid according to their output. Today's version of piecework comes into play when employers set quotas that they want workers to meet under the new monitoring systems. Labor leaders contend that the working speeds are often set according to how fast the equipment can go, rather than what pace is comfortable for an average employee. Says Joseph Weizenbaum, professor of computer science at M.I.T.: "There is a widespread notion among employers that it is bad ever to let the computer wait—ever to let it sit idle. We should realize that a few seconds aren't going to matter and say, 'Let's be human about this.' "

In their zeal to monitor the quantity of worker output, some companies may begin to overlook a factor more difficult to measure: quality. Says Terry Malthie, secretary-treasurer of the Communications Workers union local in Landover, Md.: "Telephone operators used to be a voice with a smile, but automation has depersonalized their jobs." Courtesy and carefulness remain important but elusive factors in many service-industry tasks. Notes Columbia University Professor Alan Westin, an authority on office automation: "In these types of jobs, companies who count numbers too closely will lose their edge."

Companies that have adopted computer supervision maintain that it enables them to use fewer frontline bosses. Monitoring programs can be designed to highlight problems to make them more apparent to human supervisors. Nonetheless, some managers are getting "enormous stacks of printouts on worker productivity and finding them almost impossible to really make sense of," according to Sanford Sherizen, a Massachusetts consultant who is preparing a report on monitoring for the federal Office of Technology Assessment.

As technology progresses, firms will have ever greater capabilities to keep track of employee behavior. Many large companies already monitor the records of long-distance numbers dialed by their workers in order to discourage wasteful and personal use. In the future, newer technology may enable bosses to track local calls as well. Speculates Jerry Berman, director of the American Civil Liberties Union's Project on Privacy and Technology: "Not only will they see who's calling dial-a-porn, but also who's calling a union organizer or the newspaper."

Labor groups have gone on the offensive against monitoring. More than 20 unions, including autoworkers and communications employees, have negotiated provisions in their contracts to limit the practice. The legislatures of several states, including Wisconsin and Rhode Island, have reportedly discussed laws to regulate monitoring. Computer supervision may have established itself in the workplace, but many legal skirmishes will no doubt be waged to determine just how far it should intrude into people's lives. ***—By Stephen Koepp. Reported by Charles Pelton/San Francisco and Seth Shulman/Boston***

Government Computer News
November 21, 1986

Employee Monitoring Attracts a Closer Look

By Kevin Power
GCN Staff

For years supervisors at the Social Security Administration's data operations office in Wilkes Barre, Pa., audited worker output by comparing the number of items data transcribers accurately entered in card punch machines against a performance standard.

When SSA and other agencies upgraded their computer operations, productivity standards were raised and the work environment changed. The new technology meant more was expected of workers, and it made monitoring easier for supervisors. Long-unanswered questions about stress, fairness and privacy took on new urgency for people like Joe Corcoran, a data transcriber for the SSA in Wilkes Barre and leader of the union local there.

"Supervisors as part of the routine would get a printout on an individual and show a chart, say from 8 to 8:30 a.m., on the number of keystrokes. It showed work done, work stoppage, and we were rated in part on how well we fared on the printouts," said Corcoran, president of American Federation of Government Employees Local 2809. "It was many times more stressful when you knew the mahine monitored every move. The monitoring of employees by computers had taken the human facor out of relationships."

Now the congressional Office of Technology Assessment is taking a look at electronic monitoring with particular emphasis on the tension between modern technology and individuals.

"One of the hardest things of all is determining what is the effect on attitudes, dignity and autonomy," OTA project director Chuck Wilk said recently. "So much depends on how it's applied."

Appropriate Use

The OTA study was begun last spring after Rep. Jack Brooks (D-Texas), chairman of the House Government Operations Committee, asked the office to study how monitoring is handled in the government, because preliminary investigations indicated there were no laws to ensure its proper use.

"Despite the existence of laws requiring court orders to tap and/or tape telephone communications, there appear to be growing capabilities for surveillance of federal phone calls and data transmissions, posing both security as well as individual privacy problems," Brooks said. "Although modern information technology is an essential ingredient in today's environment, its misuse would pose grave threats to our individual freedoms."

Karen Bandy, director of the OTA study, said electronic monitoring affects mostly information production workers who have "routine kinds of jobs such as processing insurance claims."

She said that while many federal offices were being monitored, the agencies may have been using the monitoring information primarily to develop fair work measurements for entire departments, rather than to check up on individuals.

The way an agency develops and employs work standards is one of the most controversial aspects of monitoring. Labor unions and the American Civil Liberties Union have voiced the loudest concerns about the fairness of work standards and the impact on work environments.

"There was a time in the past when workers felt that those comments [electronic monitoring results] were more fair than subjective supervisory reviews. At least the record was accurate and compared work in real terms," said John Harris, assistant to the president of AFGE. "Now the data is used to monitor rest periods, breaks and when you come in and leave. It's reaching the point where people can't take breaks or take short lunches in order to meet the goal."

"As you are working on line with a computer system it is an internal clock that is always on. It excuses management from doing its job," said George Kohl, director of special projects for the Communications Workers of America. "They don't deal with people and can compile records easily."

Karen Ringen, administrator of the ACLU's project on privacy and technology, said workers dislike monitoring because of the stress.

She said workers are forced to surrender personal rights because computers can be used to continuously monitor work and phone conversations.

"The technology is just being used whether it's necessary or not," Ringen said, adding that there was no way to guarantee people would use the technology wisely.

But for every "horror story," there seems to be a a case where monitoring has not caused nearly as much ire.

Success at IRS

The Internal Revenue Service currently employs electronic monitoring as part of its automated collection service. At the 21 collection sites throughout the country, IRS employees use computer-assisted telephones to talk to taxpayers about problems with returns.

IRS supervisors monitor the calls to make sure workers ask the right questions, give the proper information and handle taxpayers' problems courteously.

Supervisors can interrupt workers if they detect an error and can take over for a subordinate if a problem is very complicated.

The computer records how long a worker is on the system, the average speed of answering calls and the average conversation time and measures the time gap between hanging up and working a case problem.

Variation Allowed

Paul Harrington, IRS deputy assistant commissioner for collections, said standards are measured in terms of system totals at each of the sites and emphasized that the agency fully expects some offices to fall below national averages.

"Evaluation is done on a system basis, and we wouldn't conclude because one site is out of sync that someone's not doing the job. A site with high inventory or dealing with a certain type of tax could take longer," Harrington said.

As for employee reaction, Harrington said there have been no "widespread complaints" because the supervisors have been promoted from the ranks of telephone service workers at the most successful sites and the standards are not strictly numerical.

"The standards the workers respond to are management counseling as opposed meeting time quotas," Harrington said. "The standards measure what happens in a system and causes workers to vary their interview techniques."

Evaluating how an agency develops and implements its monitoring standards is an important part of the OTA study, but Bandy acknowledged it is a difficult task because not much research is available.

"According to the experts of standards-setting, if they [workers] can't meet them then something is wrong with the standards," Bandy said. "You want to have some goal or standard of what they can meet, but not a whole lot of studies have been done on it."

Work Standards

The Robert F. Nolan Co. of Simsbury, Conn., is a management consulting firm that specializes in improving office productivity. Ben DiSylvester, Nolan Co. executive vice president, said his company develops specific work standards based on using time measurement methods to determine the number of items a worker can enter into a computer over the course of a day.

"We take a look at the nature of the work and develop a specific work standard," DiSylvester said. "The advanced office controls process takes in the basic methods and time measurement elements and builds them into bigger blocks of data. We can calculate performance by individual, by department and by unit."

He said the calculations take in all the factors necessary to do a good job, such as allowing for workers having to leave their terminals to get more files.

DiSylvester also stressed that unless the goals of a work standard program are clearly communicated, workers will be pressured and confused.

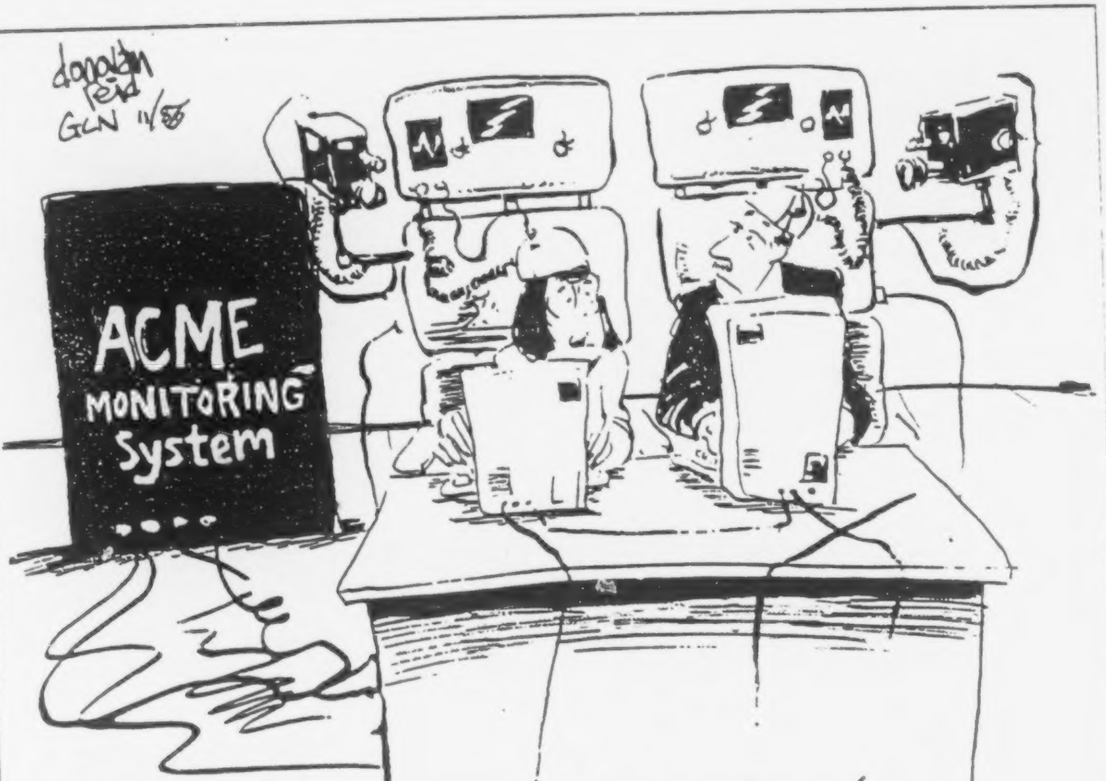
He said employees should not have to worry about the standards but rather be given regular feedback so they can reach as high a standard as possible.

"What we find is that unless the system is explained there will be problems. You don't want to wait till the end of the year and have employees see it as a club or a whip," DiSylvester said. "You must provide regular feedback on performance."

OTA's report on monitoring is scheduled to be released in February. Bandy said it would include more data about stress and quality of worklife aspects than did a midterm report issued during the summer.

"In some sense the tone changed a little bit. Monitoring is only one part of the job design picture and it's hard to separate from other aspects," she said.

Government Computer News
November 21, 1986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"AT LEAST THE CHAIRS ARE ERGONOMIC."

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COMPUTERWORLD DECEMBER 22. 1986

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Schneiderman notes that the product of monitoring is information, and he raises important questions: How important is the information? How relevant is it? Does it truly reveal the quality of the work being performed?

In far too many cases, managers collect far too much information, without the employees knowing what is being collected or how it is to be used. To limit these potential abuses, 9 to 5, the National Association of Working Women, suggests the following:

- Ban the use of subliminal software programs.
- Notify workers when auditory, visual or computer surveillance occurs.
- Allow employees complete access to their personnel files and provide them with information on how the data is collected and used.
- Establish a grievance procedure so employees can appeal incorrect data, since the computer is not always right.

In order to start out with the best foot forward, statistics should be collected by work group, rather than by individual worker. Productivity standards or work quotas should be set with employee input to reflect system problems, such as downtime and response lags, quality of service and work load variability.

These are just a few ways to prevent some of the worst abuses and give employees a minimum of protection until, in Schneiderman's words, employers can "figure out what information is really worth and can evaluate its timeliness."

Karen Nussbaum
Executive Director
9 to 5
National Association of Working Women
Cleveland

THE NEW YORK TIMES, MONDAY, APRIL 14, 1986

More Workers' Terminals Are Staring Back

By WILLIAM SERRIN

Finger strokes, anxiety levels, bathroom breaks and other actions of workers at video display terminals are increasingly being monitored by computers, according to a group representing office workers.

"Computers can prompt workers to work faster, automatically present their next piece of work, and warn them when they're falling behind predetermined production standards," said a report released yesterday by 9 to 5, the National Association of Working Women. "The computer can record when an operator turns on or off her V.D.T., count keystrokes by the second, time customer service transactions and track the number of operator errors per day."

Employers say video terminals and other computer technologies make for increased productivity and better control over costs. They add that many workers prefer the use of advanced methods and equipment.

But 9 to 5 maintains that computer monitoring invades workers' privacy, leads to unfair performance evaluations and work speed-ups, increases stress, and reduces human contact and workers' control over their work.

13 Million Work at V.D.T.

Thirteen million Americans, 11 percent of civilian employees, work at video display terminals, the report said, adding that airline, insurance and credit-card companies, among others, are using the computers to monitor their employees.

The group's report, an overview of the effect of computer techologies on workers, was based on surveys of 9 to 5 members and other clerical workers and cited a study by the National Institute of Occupational Safety and Health estimating that two-thirds of V.D.T. workers are monitored by employers.

Karen Nussbaum, the executive director of 9 to 5, told a conference on work and technology over the weekend in Teaneck, N.J., that new programs enable companies to provide on-screen jokes to relieve stress or flash subliminal messages telling employees, "You're not working as fast as the worker next to you."

She said unions should, in bargaining with employers, involve themselves with the growing use of computers in the workplace. Her organization's report said that clerical jobs "are deliberately broken down into one or two repetitive tasks in order to make computer tracking easier."

To meet production goals, the report said, "some workers feel forced to cut off customers, enter incomplete data, delete documents from other workers' files, or even drop paper clips into the machinery to slow it down."

But another speaker at the conference, Kristin Nelson of the geography department at the University of California at Berkeley, said that in her studies of clerical workers in the San Francisco area, she found that new computer technologies did not reduce worker skills. Often, she said, "if anything, automation led to greater responsibilities per worker."

The 9 to 5 report, however, said that in the long run computer monitoring would be inefficient and "end up cutting into productivity instead of increasing it."

"When a machine warns a secretary the moment she is slowing down, disciplines a clerk when he makes a mistake, and continually tallies a worker's performance, it is impossible for the employee to control his or her workload or work pace," said the report, adding that video terminals in the automated office have largely replaced personal interaction with managers.

"I can't even go to the bathroom without being watched," said one telecommunications worker cited in the report. "I have to put up a flag at my terminal, wait till the restroom is empty, sign out, sign back in, and remove my flag."

There are 12,000 members of 9 to 5, which is affliated with the Service Employees International Union, in 25 chapters around the country. The conference over the weekend was sponsored by the Department for Professional employees of the A.F.L.-C.I.O.

CHICAGO TRIBUNE - April 20, 1986

World workers warned to factor in computers

By James Warren

TEANECK, N.J.—Kristen Nygaard, who easily could fit Hollywood's version of a tweedy Scandinavian academic, absolutely adores computers. But after 40 years of using them, he frets about a future as cold for workers as winter in Norway.

"I assure you," he says, theatrically waving an arm above his shock of white hair, "one can be a strong believer in computers and still be a pessimist. The stakes are heavily against us but we have no option other than try to win."

Nygaard, a flamboyant star of the Institute of Informatics at the University of Oslo, was urging American workers to demand a role in the introduction of new technologies in the workplace. If they don't, he warned, they will find their power over daily decision-making radically weakened.

His vision pervaded a two-day conference here last week, sponsored by the AFL-CIO's department of professional employees

grows, so may certain myths. The Big Brother oversight and control feared by unions and the easy replacement of people by machines being embraced by companies could be in greater doubt than either side admits.

The anxieties nagging worker representatives were clear. They include loss of jobs, growing employer preference for mostly female part-time employees, the "de-skilling" of clerical workers, loss by workers of many traditional responsibilities and even the growth of computerized "dirty tricks" by employers.

"Technologies are not inherently evil or good," said Dennis Chamot, a former research chemist at DuPont and associate director of the AFL-CIO department of professional employees.

"For many professionals, technology is incredibly positive," Chamot continued. "But one purpose has been to eliminate direct labor and increase managerial control."

Such alleged control was the subject of a report titled "Com-

Computers

Continued from page 1

retary who heads 9to5.

Nussbaum estimates there are 13 million office workers using video display terminals and as many as two-thirds have their terminals or their telephones regularly monitored by their bosses.

She maintains that monitoring is used to determine how fast people work, how often they've left their desks and how many personal phone calls they've made and can even pick up and analyze key phrases in their telephone conversations.

"Depending on management's motives, the technology can be used to detect a worker's political involvement, union activity or personal problems," Nussbaum said.

Harley Shaiken, an automation specialist at the University of California at San Diego, raised a related key question: Will new systems be a supplement to or a total replacement of human skills?

He suggested that employers' real goals, hidden behind the guise of increasing efficiency, are to reduce their labor force and install systems that wrest decision-making from mid- and lower-level employees.

Conversely, "too much technology too soon," he said, can result in unforeseen breakdowns as systems become needlessly complex. As an example, he cited an engineer at a British aerospace firm who misplaced a decimal when using a computer to help design a new igniter plug for a jet engine. The company's skilled machinists, who once dealt directly with the engineer and his blueprint but now merely watch as the design is transferred automatically to the machine tool, then proceeded to manufacture an igniter plug 10 times bigger than normal.

Experts from Europe, where unions generally have played a more active role in trying to accommodate to technology, also warned of the dangers of rapid technological change.

Paul Jennings, an official of a union confederation with 3.5 million banking and insurance office workers in Europe, admitted that opinion was divided on whether technology was a "job killer." At the same time, he claimed that as many as 800,000 white-collar jobs in banking will be lost in Europe by 1995.

He said that new technology has caused employee tasks to be more narrowly defined, stifling initiative and leading to an increase in early retirements. Full-time workers often are replaced with part-time employees, who receive fewer benefits.

Jennings said his union has been forced to negotiate limits on the number of part-timers while, at the same time, trying to convince companies to increase the number of full-time employees by shortening the average week to 30 hours.

"We, as unions, have had to fundamentally re-examine our objectives," Jennings admitted ruefully.

Another conference participant, Ingela Josefson, of the Center for Working Life in Stockholm, said that many office workers now believe the skills needed today may be less than those formerly required to hold the same job.

A study of 9,000 office workers in Sweden's social insurance offices show that 60 percent believed their "skills had degenerated" with the introduction of computerization, she said.

Josefson's conclusion touched on what some work experts deem to be the not-incompatible trends of employee "de-skilling" and "up-skilling," trends that affect an estimated 21 million clerical workers ranging from executive secretaries to entry-level clerks and key-entry operators in the United States.

One one level, skills actually are expanded as employees learn to use word processors and computers. For an elite group, including executive secretaries and university secretaries, these new skills may broaden their jobs to include such tasks as writing reports—often without a commensurate raise in pay.

On another level, the autonomy of many workers is cut as they do ever-smaller tasks. For example, an insurance claims processor once may have had substantial leeway in processing a claim; now, the processor merely punches in a few codes and a computer determines the claim.

Many experts warned that in programming computers, companies necessarily may leave out intangible, unprogrammable human skills. The insurance processor might know small, subtle ways to speed a claim, but those are not passed on to the computer and the payment process becomes longer, not shorter, for the consumer.

Terry Winograd, who teaches in Stanford University's department of computer science, said that "getting human understanding into a machine" still is a long way off.

"The problems come when you try to replace an expert with an expert system," Winograd said. "What an expert does is not something to lay down in a set of rules. Expertise and experience is something that emerges from people talking, not out of a book."

Robert Howard, a Cambridge, Mass., specialist in work and technology, cautioned that the technological debate is awash in myths resulting in part from an exaggeration of what technology can do and the perhaps too-easy assumption that de-skilling is inevitable.

Companies can be as short-sighted as unions, Howard said, and miss the fact that "a lot of what passes for routine work is not really that routine and can't be easily automated. There are often informal conversational and negotiation skills workers have which aren't necessarily recognized by people who want to automate a job."

At the end of the conference, participants might have left with a suitcase full of academic papers and numerous questions. Jack Golodner, a Yale Law graduate who heads the AFL-CIO department of employees, said he came away informed and anxious.

"I've got the increasing sense that changes are occurring so rapidly and so qualitatively, that the ability to measure, gauge and maybe control the extent of the changes and react is hopeless."

"I listen to these people, see their concern and then return to Washington, where I see very little being done to adapt. As George Orwell wrote, we must accept the machine, but grudgingly and suspiciously."

Item 6

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CBEMA

June 10, 1986

TO ALL PRESS COVERING HEALTH AND LABOR ISSUES:

In the past few weeks, there have been a number of new claims about the negative effects of monitoring work by computer. This could indicate an escalation in the campaign of some labor groups to have states outlaw computer monitoring; over the past several years, seven states have considered such bills, though none has passed.

The Computer and Business Equipment Manufacturers Association (CBEMA) believes strongly that the measurement of work by computer is a legitimate management tool that should be used wisely, in support of the mutual goals of employer and employee. Used appropriately, monitoring and related techniques (such as incentive pay or promotion based on productivity) can increase both an organization's competitiveness and an employee's ability to advance and improve his or her standard of living.

But, like any management tool, the key to the successful use of computer monitoring is informed, intelligent use. To that end, we are circulating the enclosed set of monitoring suggestions. Our aim is to help managers use monitoring in ways that help both organizations and employees meet their mutual goals.

As you develop stories on this timely subject, our president, Vico Henriques, and I will be available to talk with you. Please let us know if we can help.

Sincerely,

Dr. Charlotte LeGates
Director of Communications

/leg

Computer and Business Equipment Manufacturers Association 311 First Street, N.W., Suite 500, Washington, D.C. 20001 (202) 737-8888

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CBEMA

SUGGESTIONS FOR THE EFFECTIVE USE OF COMPUTER MONITORING

Automatic measurement of work done on a computer can be an effective management technique. It can help managers set reasonable goals, identify problems and reward high-achieving employees. It can help employees meet their own and their employers' goals.

But like any management tool, computer monitoring can be used in ways that decrease workplace morale or cause employees undue distress. To avoid those problems and get the most out of your computer investment, the Computer and Business Equipment Manufacturers Association (CBEMA) suggests the following techniques:

- Make sure employees understand how and when their work is being measured, and why measurement is necessary.
- Give employees access to their records and regular, supportive feedback. Some organizations permit employees to access their records at will, through the computer. Others make weekly or monthly totals available. Make sure employees understand how to correct any erroneous records.
- Measure only those items that are essential for meeting organizational goals. If, for instance, the number of keystrokes per month is the only relevant statistic, don't collect information on the number of breaks.
- Use statistics to spot problems early. Low productivity could indicate a need for more training. A sudden productivity drop could mean a physical or personal problem that a manager could help solve.

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- Anticipate individual differences in needs for length and number of breaks or in work speed. Try to establish goals that allow individuals to regulate their workday as much as possible.

- Reward individuals appropriately. Some organizations use incentive pay for work done above a certain level. Others use verbal or promotional awards. But be alert to the occasional employee whose need for such rewards might lead him or her to work for excessive periods without breaks; sitting for long periods of time, especially when the task is physically repetitious, can cause discomfort or even pain.

- Be careful about using statistics to inspire competition. Employees should know how they rate against their goals and against departmental averages. And publicly rewarding high-achieving individuals can be very positive. But most employees resent receiving public criticism. Systems in which all individual production scores are circulated or posted on bulletin boards can backfire by making that half of employees who are by definition "below average" angry and tense.

- Once reasonable rates are established, employees tend to resent managers who "inch-up" production standards so that people have to work harder and harder to achieve the same rate of pay. Changes in production goals may at some points be necessary; new software, for instance, may speed the work, or an organization in trouble may have to change standards as part of a company-wide pay decrease. But appearing to drive employees faster and faster, to the point where they become angry or quit, is a poor management technique, leading employees to feel that they are working under "sweatshop" conditions.

FOOTNOTES

1. Alan F. Westin, *Privacy and Freedom* (N.Y., Atheneum, 1967), Chapters 4 and 5.

2. *Ibid.*, p. 107.

3. *Ibid.*, Chapters 5 and 8.

4. Alan F. Westin, *Privacy Issues In The Monitoring of Employee Work On VDTs In The Office Environment: Practices, Interests, And Policy Choices* (December, 1984), hereafter "*Westin-OTA, 1984*."

5. *Conn. Gen. Stat.*, Sec. 31-48b(b).

6. See Westin, *Privacy and Freedom*, note 1 *supra*, Chapter 8.

7. "Use of Electronic Surveillance Devices By Employers Limited. Prohibition on Recording Negotiations Between Employers and Employees." Conn. Gen. Stat., Sec. 31-48b(c). No reported cases under either sub-sections (b) or (c) of this law appear in the Annotations or pocket parts of the Connecticut code as of 1986.

8. 18 U.S.C. Section 2500 (1968).

9. For a listing and analysis of state statutes, see *Electronic Surveillance: Report of the National Commission for the Review of Federal and State Laws Relating to Wiretapping and Electronic Surveillance* (Washington: GPO, 1976).

10. For a listing and texts, see Robert Ellis Smith, *Compilation of State and Federal Privacy Laws*, 1985-86 Edition (Washington: *Privacy Journal*, 1986).

11. For the 1978 survey, see *The Dimensions of Privacy: A National Opinion Research Survey of Attitudes Toward Privacy*, Conducted for Sentry Insurance by Louis Harris and Associates and Dr. Alan F. Westin, 1979. For the 1983 survey, see *The Road After 1984: The Impact of Technology on Society*, a study by Louis Harris and Associates for Southern New England Telephone Company, 1983.

12. This literature is summarized well in Michael J. Smith, Pascale Carayon, and Kathleen Miezio, *Motivational, Behavioral and Psychological Implications of Electronic Monitoring of Worker Performance*, Contractor Report to OTA, 1986.

13. "Big Brother in the Workplace," Transcript #2153, The MacNeil-Lehrer News Hour. December 28, 1983.

14. "Work Monitoring," Transcript, ABC-TV Nightly News, May 29, 1984.

15. Robert Howard, *Brave New Workplace* (New York: Viking, 1985).

16. See, for example, "Workers Pay Price for Automation," *Kansas City Star*, July 11, 1982; "Area Office Workers Suffer From Job Stress, Group's Survey Finds," Baltimore *Sun*, April 20, 1982; "VDTs: Visual Distress Terminals?" Miami *Herald*, Sept. 3, 1983; "Stress: The Wages of Automation in the Modern Office," Seattle *Times*, Jan. 30, 1984.

17. See, for example, "Corporate Big Brother Is Watching You," Dun's *Business Month*, January, 1984.

18. See sample cites in note 16 *supra*, and "Legislator Says VDTs Peril Workers' Health. San Francisco *Chronicle*, May 16, 1984; "Productivity Spies: Computers Keep Eye On Workers And See If They Perform Well," *Wall Street Journal*, May 5, 1985.

19. OTA, *Automation of America's Offices, 1985-2000* (Washington, D.C. GPO, OTA-CIT-287, December, 1985), pp. 129-132.

20. U.S. Department of Labor, Office of the Secretary, Women's Bureau, *Women and Office Automation: Issues for the Decade Ahead* (1985), pp. 25, 27, 28.

21. See the discussion of the U.S.D.A. system in *Westin-OTA, 1984*, note 4 *supra*.

22. The case in which this record was generated is also discussed in *Westin-OTA, 1984*, *ibid*.

23. "When Machines Monitor Work," *World of Work Report*, Work in America Institute, Vol. 9, No. 5, 1984.

24. Telephone interview by Nancy Warren, Educational Fund for Individual Rights, November 8, 1984.

25. The study is fully described in Alan F. Westin, Heather A. Schweder, Michael A. Baker, and Sheila Lehman, *The Changing Workplace* (Westchester, N.Y., Knowledge Industries, 1985).

26. See forthcoming "VDT Update Report; 1985-1986," available in February, 1987 from The Educational Fund for Individual Rights, 1100 Trafalgar Street, Teaneck, New Jersey 07666.

27. Published by 9to5, April, 1986, quotation at page 2.

28. *Ibid*., note 25 *supra*.

29. "Work Standards and Performance Monitoring," (Chapter 6, page 2).

30. *Ibid*.

31. "Campaign on VDT Risks: Analysis of VDT Operator Questionnaire of VDT Hotline Callers," 9to5, February, 1984.

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35. *Office Safety*, American Federation of Government Employees, 1983.

36. Interviews by Nancy Warren, Educational Fund for Individual Rights, with staff of NAGE, 1984.

37. *Ibid*, Interviews with NAGE, AFGE, and NFFE staffs, 1984.

38. Interviews by Heather Schweder, Educational Fund for Individual Rights, with Czarina Palting and Paulette Van Norman, U.S. Office of Personnel Management, October, 1984.

39. Interviews by Alan F. Westin with Mary Anderson and Jack Connors, U.S. General Services Administration, December 7, 1984.

40. Interview by Heather Schweder with Joseph Young, Chief, Data Processing Division, U.S. Department of Transportation, October 25, 1984.

41. Letter to Alan F. Westin from Edward J. Minbel, Managing Director, Federal Communications Commission, November 2, 1984.

42. Letter to Alan F. Westin from D.K. Stephens, Grants and Information Management Officer, National Endowment for the Arts, October 30, 1984.

43. Letter to Alan F. Westin from Paul G. Swope, Director, Office of Computer Sciences, U.S. Small Business Administration, November 6, 1984.

44. Letter to Alan F. Westin from D.E. Lemmon, Director of Management Policy and Systems, U.S. Department of Labor, November 6, 1984.

45. Interview by Alan F. Westin with Steve Matthews, Federal Reserve Board, November 29, 1984.

46. Enclosed with letter to Alan F. Westin from Glenn P. Haney, Director, Office of Information Resources Management, U.S. Department of Agriculture, November 9, 1984.

47. Letter to Alan F. Westin from William M. Hunt, Associate Director for Administration, U.S. Office of Personnel Administration, December 6, 1984.

48. Interviews by Nancy Warren with NFFE, AFGE and NAGE staff members, November-December, 1984.

49. Peter Perl, cited in note 34 supra.

50. Interviews at SSA and with AFGE by Alan F. Westin, 1984-86. See also "SSA and Its Employees: Labor-Management Relations," in OTA, The Social Security Administration and Information Technology-Special Report, OTA-CIT-311 (Washington, GPO, Oct. 1986), pp. 61-63.

51. Peter Perl, cited in note 34 supra.

52. Interview by Nancy Warren with APWU official, October 31, 1984.

53. Statement of William H. Burrus, Executive Vice President, American Postal Workers Union, before the Hon. Parren J. Mitchell, Baltimore, MD, February 14, 1984.

54. Interview by Alan F. Westin with Peter Jones, Director, Justice Employee Data Service, U.S. Department of Justice, December 7, 1984.

55. Ibid.

56. Interview by Alan F. Westin with Ed Moriarity, Chief of Management and Resources Branch, IRS, October 3 and 4, November 11, and December 3, 1984.

57. Union interviews were held by Alan F. Westin with staff at National Treasury Employees Union, June, 1984.

58. "Corporate Big Brother is Watching You," Dun's Business Month, January, 1984.

59. "AWT - A Real Stress Point," CWA News, April, 1984.

60. See the account in Peter Perl, note 34 supra.

61. Testimony of Rebecca Alford, Service Employee International Union and 9to5, the National Association for Working Women, before the Hon. Joseph Gaydos, Subcommittee on Health and Safety, House Education and Labor Committee, Hearings on Video Display Terminals, February 28, 1984.

62. Quote on MacNeil/Lehrer program, note 13 supra.

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69. Documents in this case were furnished to us by Katherine A. Black, Business Agent, Oregon Public Employee Union, Local 503, SEIU, in March and June of 1984. We express our appreciation to Ms. Black for this assistance.

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71. Office of Management and Budget, "Telephone Call Reduction Initiatives," News Release, March 19, 1985, 1 page.

72. Letter, Representatives Don Edwards and Patricia Schroeder to Joseph R. Wright, Jr., OMB, March 13, 1985.

73. Letter, Joseph R. Wright, Jr., OMB, to Representative Don Edwards, April 12, 1985.

74. Letter, Representatives Don Edwards and Patricia Schroeder to Joseph R. Wright, Jr., OMB, May 2, 1985.

75. Douglas H. Ginsburg, Administrator for Information and Regulatory Affairs, OMB, Memorandum for the Chairman, President's Council on Integrity and Efficiency, Aug. 8, 1985.

76. Telephone interview by Alan F. Westin with Benjamin H. Friedman, General Services Administration, April 1, 1986.

77. Telephone interviews by Alan F. Westin with Jerry Berman, ACLU, May 1, 1986; with James Dempsey, Congressional Committee staff, April 3, 1986.

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EMPLOYEE MONITORING IN OTHER INDUSTRIAL DEMOCRACIES

This document was prepared for the OTA assessment, The Electronic Supervisor: New Technology, New Tensions, September 1987.

Submitted by The Educational Fund
for Individual Rights

Prepared by Russell Pipe and
Alan F. Westin

FINAL VERSION, August, 1986

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PART I

OVERVIEW OF NATIONAL SITUATIONS IN OTHER INDUSTRIAL DEMOCRACIES

INTRODUCTION

Workplace monitoring, as discussed previously in the theoretical section and U.S. materials of our report to OTA, involves a society's value system, institutional arrangements, and legal rules on at least five major social issues of current significance in advanced industrial democracies:

- The nature of work, and individual roles and responsibilities of workers;
- Employer-employee relations, and the role of trade unions;
- Investigation and control of crime at the workplace, and related security-integrity issues (e.g., drug testing);
- The definition and protection of privacy-dignity interests of employees;
- Use of advanced information technologies by private or public authorities.

We also noted that workplace monitoring issues need to be analyzed by taking into account three empirical conditions:

- the employer's declared purpose for and actual uses of monitoring;
- the type of monitoring techniques used; and
- the process by which monitoring is proposed, implemented, and administered.

In this segment of our report to OTA, we explore how other advanced industrial democracies and some multi-national or international agencies are approaching workplace monitoring. Our goal is to collect experiences and social responses; examine legal/regulatory actions where these have taken place or are now being proposed; and to identify social or legal concepts in other societies of potential value for U.S. choices on workplace-monitoring issues.

MAJOR VARIABLES IN NATIONAL SITUATIONS

In examining how other advanced industrial democracies have treated workplace monitoring, we will be concentrating our reports on the OECD nations. While each country has its unique national institutions and processes, several groupings of political/legal cultures are present:

- the British-Commonwealth nations (Britain, Ireland, Canada, Australia, New Zealand), sharing the English common-law legal tradition;
- Northern-European nations with a strong Napoleonic-legal-code and "administrative-state" tradition (France, West Germany, Austria, Switzerland, Netherlands, Belgium);
- the Nordic countries, with a blend of continental legal tradition and Scandanavian social-welfare institutions (Norway, Sweden, Denmark, Finland);
- the Southern-European nations (Italy, Spain, Portugal), with Latin adaptations of Northern-European legal-political cultures;
- and Far Eastern industrial democracies (with Japan as the principal OECD member).

Among these nations, there are at least three major variables in their national legal-political cultures that directly shape positions on workplace monitoring:

(1) the industrial relations system;

(2) legal/regulatory treatment of work and workplaces; and

(3) attitudes toward technology and privacy protection, and laws evolved in response to new information technology uses;

Each of these merits a brief description.

1. Industrial Relations Systems

a. Institutional Patterns

In general, there are two main types of employee representation systems in other advanced industrial democracies (and some countries have both types in operation simultaneously):

- The union-representation system, the most similar to the U.S., is a voluntaristic system based on labor-management negotiated agreements. Employees have freedom to associate (or not); unions have rights to organize; union members elect representatives; and the union negotiates with management a detailed agreement as to terms and conditions of work. In the event of impasse, the union relies on the right to strike and management on the right to lock out workers who refuse management terms. Voluntary mediation systems and labor courts are used in some countries to resolve contract disputes. Nations with this system such as Britain, Ireland, and Greece, vary in whether there is one national union for all workers in each major industry (auto manufacture, electronics, etc.) as in Sweden and West Germany, or whether several unions, often as many as three to five, share juridsdiction for different groups of workers (usually by skill or trade) within that industry, as in Britain. There can be industry -wide collective agreements (as when the entire steel industry and the steel union sign a contract), or there can be enterprise (one company) agreements. There are also national confederations of trade unions as well, along general lines such as industrial work, white collar work, etc. The union representation system creates a strong shop-steward and local-union presence within individual plants, and important contract terms are often asserted and negotiated at that level. In Japan, unions are organized primarily along company lines: one union for Toyota, Sony, Hitachi, etc.; these "company" unions also belong to one of two main national confederations of Japanese trade unions. The union-representation system is often called a "power-struggle" process, in which bi-polar positions are asserted and economic/political strength determines the outcome; in this process, attitudes of the political parties and the government in power can play a key role, as can public sympathy -- or lack of sympathy -- toward the position of unions or management.

- The other main industrial relations mechanism is the employee-representation works council system. This is created by national legislation that provides for election by all workers at a location of employee representatives to serve on a works council for a plant or facility, composed of representatives of both employees and management; the legislation spells out a set of rights and procedures for this consultative system. Nations such as West Germany, Sweden, Belgium, and the Netherlands have legislated work councils, which operate alongside and are legally independent of the union representation systems in those countries. (In addition, West German co-determination legislation requires 50% representation for employees on the Boards of Directors of stockholder-based companies with more than 2,000 employees. Smaller companies are required to give employees one-third representation on their Boards.) The works councils are to consider all decisions affecting work and workers. There is an obligation on management to discuss and cooperate with employee representatives, and when they can agree, this produces work council decisions that will be implemented. Traditionally, works councils deal with health and safety, job environment, hiring and firing, wages and hours, work rules, etc. They can also take up election of company officers, investments, staffing plans, and social policies. In the past decade, new technology introduction and its effects have been a major topic of discussion among works councils. When management and employee representatives disagree over whether something should be done, or how, or whether a prior decision is being properly implemented, the issue goes to labor courts for decision. (In West Germany, there is a hierarchy of local, regional, and federal labor courts.) Generally, these courts still recognize a substantial area of management rights, and will allow, for example, very broad latitude to managements in the decisions about designing or adopting new technology, or doing work measurements and performance evaluation. The work-council system is often called a "power-sharing" system.

b. Trade Union Patterns

The percentages of workers who belong to or are represented by unions varies considerably from country to country. The degree of unionization obviously has an effect on how strongly unions can assert demands and campaign effectively to win these, either in labor contracts or in legal/regulatory actions. Analyses of levels of union representation in the early 1980's generally divided industrial democracies into three groups: low, medium, and high unionization.*

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* Asplund, C., "Information, Technology, and Trade Unions," in Bjorn-Andersen, N., Earl, M., Holst, O. and Mumford, E. (editors), Information Society: For Richer, For Poorer, North-Holland Publishing Co., 1982, p. 223.

- "Low" levels (23-40%)

United States	22%
France	23
Japan	30
Canada	35
Switzerland	35
West Germany	40
Netherlands	40

- "Medium" levels (50-60%)

Italy	50%
Ireland	50
Britain	52
Austria	60

- "High" levels (65-90%)

Belgium	65%
Norway	65
Denmark	70
Finland	85
Sweden	90

Traditionally, union representation tended to be much higher in the industrial sectors than in office and white collar work. However, the expansion of government office work and a surge of white collar union organizing in OECD nations in the 1960's and 70's has brought office-work representation up substantially.

In terms of their general attitudes toward technological change, most European unions were "cautiously optimistic" in the 1950's and 1960's, because of rising employment opportunities and levels, generally good pay and benefits, and the presence of expanding governmental programs to cushion specific problems and provide social-safety-nets. The introduction of microelectronics in the factory and office in the 1970's, accompanied as it was by rising unemployment, fears of permanent job losses, and concern over loss of union/worker influence in the work process, and with world-wide recession and oil-crises as the background, led many European unions to become worried and pessimistic about the way employers were installing new information technology. One study by a Swedish trade union expert classified the dominant attitude of unions in European nations in the early 1980's toward new information technology as follows:*

"Positive" -- West Germany, Italy, Austria, Netherlands, Nordic countries;

"Negative" -- France;

"Unclear" -- Britain, Switzerland, Ireland

One important facet of recent trade union activity is the negotiation of Technology Agreements, especially for factory and office automation. In Britain, for example, a study of union-management Technology Agreements (primarily signed between 1979 and 1981) found the most frequent subject to be the design, installation, and operation of Video Display Units. Of 105 agreements examined, 66 had no mention of "machine monitoring" of VDU workers; 22 banned such a practice (though 3 of these contained "ambiguously worded" clauses); 9 had a "commitment to discuss" by the parties; and 8 accepted machine monitoring "subject to safeguards."**

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* Asplund, op. cit., p. 221.

** Williams, Robin and Moseley, Russell, "Technology Agreements: Consensus, Control, and Technical Change in the Workplace (1)," in Bjorn-Andersen et al., op. cit., pp. 240-241.

2. Legal/Regulatory Treatment of Work and Workplaces

While many laws and regulations governing work in OECD nations parallel those in the United States (occupational health and safety laws; payroll contribution for health and accident insurance, and old-age pensions, etc.), there are some important differences that can relate to worker monitoring issues. Many European countries promulgate legal standards or set "official guidelines" for work processes or conditions, covering either all workplaces or all workers using a particular machine or process. In the U.S., many of these matters have been left to union-management bargaining (in union-represented establishments) or to employer discretion, especially in private industry. Nations such as West Germany have been particularly active in promulgating ergonomics standards for VDTs, while Sweden and Norway have enacted broad Work Environment laws that oblige employers to pursue healthy, humane, and dignified work settings.

Another major difference is that other industrial democracies have unjust dismissal laws, under which individual workers who are discharged can go before industrial courts or commissions and challenge their terminations. If the employer shows good cause or business justification, the employee loses, but if the employee shows that arbitrary, unfair, or unjustified dismissal took place, the court or commission can award the employee compensatory relief. Potentially, a worker who wanted to challenge a termination on the basis of unfair or incorrect machine monitoring of performance could raise such an issue in an unjust dismissal action. The tribunal would look to see whether the employer's action was within management's powers and was fairly applied, or not.

3. Attitudes Toward Technology and Privacy Protection

A useful snapshot of similarities and variations among OECD nations was provided by an eight-nation public opinion survey conducted in 1985 by Louis Harris International and the Atlantic Institute for International Affairs.* The eight nations were: France, West Germany, Britain, Italy, Norway, Spain, United States, and Japan. As can be seen, these eight nations cover the major types of national legal/political systems among advanced industrial democracies. In all, 9,000 interviews of persons of eligible voting age were conducted, with sufficient numbers in each country to provide representative sampling to the national populations. Similar polls were conducted by the Atlantic Institute going back to 1982.

While the survey reported on many important topics (rising concern over unemployment as a result of technological change, willingness to undergo retraining, degree individuals have already used computers, etc.), we will focus on several responses related to national attitudes on information-technology use, work, and invasion of privacy issues.

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* Atlantic Institute for International Affairs, Louis Harris International, The Impact of Technological Change in the Industrial Democracies, May, 1985.

One question asked whether the use of information-processing systems will cut down on "more tedious tasks" in the workplace. The responses were:

	FRANCE	GERMANY	BRITAIN	ITALY	NORWAY	SPAIN	USA	JAPAN
Mostly agree	65	38	79	63	74	75	77	39
Mostly disagree	23	25	12	27	18	21	19	26
No answer/ No opinion	12	37	9	10	7	4	4	35

As this indicates, the publics in Britain, the U.S., Spain and Norway approved this view by over 70%, while only 38% of West Germans and 39% of Japanese shared that view. (In the case of Japan, an unusually high 35% had no opinion or did not answer that question.)

A second relevant question asked which groups were among the most important "obstacles" to the "development of new technologies" in their country. The responses as to employers, labor unions, and political leaders were:

	FRANCE	GERMANY	BRITAIN	ITALY	NORWAY	SPAIN	USA	JAPAN
Our political leaders	14	20	21	37	12	12	35	16
Labor unions	21	14	43	21	6	6	25	14
Employers	8	8	9	9	3	12	25	7
No opinion/ not sure	18	38	10	25	39	27	4	40

It is interesting that, in the U.S. sample, employers and unions were cited as "obstacles" by an equal number of respondents (25%) while U.S. political leaders were seen as "obstacles" by a significantly higher percentage (35%). Also worth noting is the result that in Britain, 43% of the British respondents cited labor unions as an obstacle, the highest number for any country surveyed. This probably reflects the highly-publicized positions taken by trade unions in industries such as newspaper printing and coal mining.

A final question relevant for our topic asked whether respondents believed it will be increasingly possible to use computer data banks to infringe personal privacy. The responses were:

	FRANCE	GERMANY	BRITAIN	ITALY	NORWAY	SPAIN	USA	JAPAN
Mostly agree	71	51	75	37	56	69	68	50
Mostly disagree	19	20	13	35	35	24	28	18
No answer/ no opinion	10	29	12	12	9	7	4	32

Presented in rank order, this shows the following country levels of concern about privacy invasion by computers:

Britain	75%
France	71
Spain	69
U.S.	68
Norway	56
West Germany	51
Japan	50
Italy	37

The 68% figure for the U.S., incidentally, is close to the levels of U.S. survey data obtained in polls from 1979 to 1984, which have found 64-77% of respondents expressing such concern.

Applicability to Data Privacy Laws

In the early 1970s considerable public and press concern in Europe was aroused over the potential invasion of privacy by extensive computerization of personal records. Many of the same issues that led to enactment of the Privacy Act of 1974— intrusive population census questions; forecasting of vast national data banks; and new, invidious powers of control over the citizenry made possible by manipulation of computer data— prompted European governments to prepare personal data protection legislation. Under the parliamentary system, political issues are studied by ministers, who are themselves members of parliament, and once consensus is reached by the cabinet or Council of Ministers, this is tantamount to passage by the national legislature. Sweden began preparing its Data Act in 1971 which resulted in the first national law in 1972. By 1979 Austria, Denmark, France, Germany (FR), Luxembourg and Norway also had adopted statutes along similar lines.

The fundamental motivation of the Europeans has been to ensure that personal privacy was not eroded as a result of data processing applications. Unlike the United States, however, defining what constitutes "undue encroachment on a data subject" (from the Swedish Act), and arriving at remedies or penalties against improper use of personal information is not left to the individual. Rather, an administrative structure or regime was considered necessary, based on certain prescribed personal information handling practices backed up by an independent government agency with supervisory and enforcement powers. Thus the term for "computer privacy" in Europe is "data protection".

In Europe, government historically has had a far greater role in citizens' lives, one consequence being far more personal information is collected by the various bureaucracies from municipal to central government authorities than is the case in the US. This is well-accepted tradition. Data protection legislation was not prompted as a reaction to the excessive collection of personal information by government agencies; it was the introduction of data processing arousing fears that millions of manual records suddenly would be automated, capable of unlimited and unrestricted linkage, reuse and dissemination. Most European governments have or will impose data protection norms on users (responsible keepers) of personal records. In the US, similar normative rules are often referred to as fair personal information practices.

Continental law is usually far more general and all-encompassing than Anglo-American practice of narrow target legislation. This is the case with data protection. Personal information is defined very broadly, essentially any detail that can be linked or identified with a particular individual. Similarly, they cover any process or activity in which data processing is involved. The only real delimitation in some laws, such as in Germany and Norway, requires that personal data collected must be name-retrievable. Architects of European data protection designed the legislation around the notion of static databases (data banks) which could be identified, registered, inspected and, as necessary, erased.

The convergence of data processing and telecommunications renders obsolete the well-ordered concept embodied in these laws. Nevertheless, even the 1984 Data Protection Act of the United Kingdom is founded on registering formal systems of records and describing their main characteristics. The advent of word processing and new telematic services such as electronic mail and EFT are almost impossible for data protection authorities to deal with. Automated, name-linked data are present in these applications, which brings them within the scope of the data protection law, but a formal database may not exist.

Although the word monitor does not appear in any European data protection law, their objectives are certainly to regulate computer-assisted monitoring, defined by Webster as "to watch or check on a person or thing." The principal focus of attention by data protection authorities (DPAs) from 1973 to the present has been to establish national registers of databases containing personal data and prescribe compliance with statutory requirements. DPAs are trying to prevent the build-up of "profiles" or computer "dossiers" on individuals. Such activities are referred to as preventing the monitoring of people, inasmuch as monitoring is seen as the collection and/or linkage of numerous details about individuals into a master record. In this sense DPAs have been involved in employee monitoring matters for some years.

Work monitoring, such as computer-usage monitoring, telephone-call accounting and work measurement, are subject to data protection regulation if data collected can be related to specific employees and data processing is involved in the collection, storage or use of such information. DPA officials have expressed both increased interest and frustration over their inability to regulate applications of what are referred to as "new information technologies". The advent of personal computers and proliferation of terminals make the notion of registering static systems of personal records increasingly obsolete. Either through adaptation of existing data protection law or enactment of "second-generation" legislation, European DPA leaders insist they will become more involved in new forms of potential instrusion on personal information privacy.

It is because DPAs have been preoccupied with their first-line obligations of bringing large government and business personal information collections into compliance with data protection acts that work monitoring has not received significant attention. Trade unions and labor law are the focal point of such monitoring and are likely to continue to be for some time in the future. There appear to be no jurisdictional problems for DPAs to become involved with work monitoring problems along with trade unions, works councils and labor courts. It may be the failure of trade unions to seek DPA assistance that has not accelerated the use of data protection laws in allegedly improper monitoring practices.

Main Provisions of Foreign Personal Data Protection Legislation Relevant to Coverage of Employee Monitoring

	National legislation											
Provisions	Austria	Canada	Public Denmark	Private Denmark	France	Germany FR	Iceland	Israel	Luxembourg	Norway	Sweden	UK
Scope of application:												
Central government	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y
Provinces/states	Y	N	Y	N	Y	Y[5]	Y	Y	Y	Y	Y	Y
Private sector	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
Covers all information traceable to identifiable individuals	Y	Y	Y	Y	Y	Y	N[1]	N[2]	Y	Y	Y	Y
Information collected and/or processed using computers	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Limits placed on personal data collection	Y	Y	Y[3]	Y	Y	Y[4]	Y	Y	Y	Y	Y	Y
Personal information must be collected for specified, legitimate purposes	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Individuals have right of access to inspect personal information	Y	Y	Y	Y	Y	Y	Y[1]	Y	Y	Y	Y	Y
Sensitive personal details specified (collection only with data subject's knowledge and consent)	N	N	Y	Y	Y	N	Y	N	Y	Y	Y	Y

Y = Yes
N = No

1 Covers information concerning private affairs, such as financial situation of individuals.

2 Covers information on an individual's personal status, intimate affairs, economic position and vocational qualifications.

3 Collection of personal data limited unless it is "natural part of the normal operations of an enterprise."

4 Personal information collection is permissible if it serves the purpose of a contractual relationship or there is a legitimate interest in (a business) storing it.

5 State laws may be enacted that for personal data maintained by the public sector

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Applicability of Foreign Personal Data Protection Legislation to Employee Monitoring

	National legislation											
Type of monitoring	Austria	Canada	Public Denmark	Private Denmark	France	Germany FR	Iceland	Israel	Luxembourg	Norway	Sweden	UK
Employee computer-usage monitoring (by IDs, terminals and passwords)	Y	Y	Y	Y	Y	Y[1]	U[2]	Y[3]	Y	Y[1]	Y	Y
Telephone-call accounting	Y	Y	Y	Y	Y	U	U	Y[3]	Y	Y[1]	Y	Y
Work measurement	Y	Y	Y	Y	Y	Y[1]	Y	Y	Y	Y[1]	Y	Y

Y = Yes
U = Uncertain

[1] Personal data covered by this law must be organized or filed so as to be retrievable automatically using identifiers that can be linked to a particular person.

[2] Information must be related to a person's private affairs, such as financial situation.

[3] An official translation (Chapter I, para 2) states that it is an infringement of privacy to:
a) spy on or trail a person in a manner likely to harass him, or any other harassment; and
b) "listen in".

Data Protection

Data Protection Becoming World-Wide

Since 1970, national and provisional governments of 12 countries of Europe, Australia, Canada, Israel, New Zealand and the United States, have adopted laws to provide legal protection to individuals, and in some cases legal entities, over the collection, processing, use and dissemination of their personal details. This section reviews developments in countries and in such international organizations as the Council of Europe, the OECD, and UN Commission on Human Rights. In the first TDR issue each year we provide an update and forecast of legislative developments in this field around the world. (See Table)

A commission of the Brazilian congress is preparing a personal data privacy bill; the government of Colombia intends to submit data protection legislation soon after making inquiries with European data authorities; and Hong Kong intends to place legal rights over records concerning individuals before the British Colony reverts to the People's Republic of China in 1997. These are examples of the heretofore "computer privacy" phenomenon initiated by OECD countries and Israel that have taken root in developing, newly industrializing and also Eastern European nations.

While granting citizens power to limit the collection and use of their personal details as well as access to such records is a characteristic of democratic nations, seen as a guarantee provided by the UN Convention on Human Rights, certain Eastern European and other countries have or are considering legislation dealing with the handling of computerized personal information. Hungary has adopted a data protection law for the confidentiality and security of personal information. This statute has similarities to Western European statutes, except that access to government held personal data is not granted. The Soviet Union, in fact, adopted a law in the mid-1970s to restrict access and confidentiality of computerized electoral records.

In Western Europe several countries have data protection bills in advanced stages of preparation and their adoption may be forecast in 1986. These are Finland, the Netherlands, Spain and Portugal. Spain has ratified the Council of Europe Data Protection Convention and due to its coming into force on October 1, 1985, is expected to expedite passage of a law in 1986. Other countries have prepared draft data protection bills but because of long consultation periods or changes in government, have not adopted legislation. These include Belgium, Ireland, Italy, Switzerland and Yugoslavia. A draft bill has been under review by the Japanese prime minister's office for some time.

Status of Data Protection/Privacy Legislation - January 1986

Country	National	Subnational	Reports
Australia	(P)	L	R
Austria (Rev)	CL		
Belgium	P		R
Brazil	P		
Canada	L	L	
Colombia	P		
Denmark (Rev)	L		
Finland	P		R
France	L		
Germany (Rev)	L(P)	L	R
Greece			RP
Hong Kong			RP
Hungary	L		
Iceland (Rev)	L		
Ireland			RP
Israel	L		
Italy	P		R
Japan			R
Luxembourg	L		
Netherlands	CP		R
New Zealand	L		
Norway (Rev)	L		R
Portugal	CP		
Spain	CP		R
Sweden	L		R
Switzerland	(P)	L	R
Turkey			RP
UK	L		R
US	LP	L	R
Yugoslavia			RP

Code:

L	Law Adopted
R	Government report/bill prepared
C	Constitutional provision
P	Parliament (Congress) Consideration
(P)	Draft legislation prepared
RP	Government report in preparation
Rev	Law being revised

Source: Transnational Data Report

PART II

EUROPEAN NATIONS: FEDERAL REPUBLIC OF GERMANY AND NORWAY, AND BRIEFER TREATMENT OF FRANCE, AUSTRIA, BELGIUM AND SWITZERLAND

FEDERAL REPUBLIC OF GERMANY (FRG)

Labor relations in the Federal Republic of Germany (FRG) have a strong legal component, as is typical for German society as a whole. There is even a complete separate branch of the judiciary for labor law. It is characterized by the participation of appointees of workers' and employers' organizations on the bench in lower courts; the Federal Supreme Labor Court (Bundesarbeitsgericht, or BAG) has a majority of professional judges. This court system deals with:

1 individual workers' rights (wage matters being by far the majority of cases);

2 problems arising from collective bargaining agreements (occasionally involving settlement of strikes);

3 the Works Council system.

The Works Council is the focus of a statutory system of employee participation in decision making at the company level. In public administration there is a Personnel Council with a somewhat comparable position. Participation does not always mean full decision sharing but covers a range from being informed to consultation and co-determination, the precise scope of which has been subject to frequent litigation. One of the matters within this kind of litigation has been electronic monitoring of employees. In co-determination the Works Council may conclude a formal agreement with the employer. If no agreement is reached the matter may be referred to an Arbitration Commission for disposition.

The FRG traditionally has strong and cooperative labor-management relations. Union influence in day-to-day matters is said to be considerable, but the trade unions there share in the difficulties of Western Europe as a whole in these times of rapid technological change, mass unemployment, and not always favorable political environment. Still, social peace in West Germany is a strongly felt value and days lost from strikes are said to be among the lowest in Western Europe. Tensions have risen recently, however, because of government plans to change strike laws. A majority of the trade unions is federated in the Deutsche Gewerkschafts Bund (DGB) with a total of 7.8 million members. The single most important union is the steelworkers' union IG Metall with 2.5 million members, proudly called "the biggest in the free world". Union membership in this sector traditionally is very high, up to 70 percent. Average union membership in 1980 stood at 42.6 percent of the work force but has dropped to about a third. Outside DGB, a union of higher-qualified employees, *Deutsche Angestelten Gewerkschaft* (DAG), has only half a million members but enjoys a growing influence as DGB is losing some of its appeal, especially to young people.

Worker surveillance——background

Established forms of worker surveillance include time clocks, punchcard systems, multi-movement cameras, so-called *produktographs*, and telephone monitoring. The use of polygraph tests in labor relations is frowned upon in the FRG, as it is in the rest of Western Europe, but handwriting analysis, *graphological testing* of people applying for a job is practised and has been accepted by the BAG (provided the person concerned has consented).

The standard questionnaire for job applicants in private industry must be approved by the Works Council, as must standard practices and tests in job interviews. Psychological testing of job candidates is not uncommon; the BAG since 1964 requires that it not be done without good reasons (such as special responsibilities that go with a job). The right of employers to inquire about the health of prospective employees has been tied by BAG (June 7, 1984, DB 1984, p 2706) to the extent and legitimacy of their interest, considering the particular labor relationship at stake. Many companies have their own medical departments that advise management in health aspects of working conditions and also may counsel individual workers at their request.

Employers are allowed to ask job seekers about their criminal history and may require them to produce an official statement from the central criminal records office. It has repeatedly been held, however, that questions of this kind have to be strictly related to the nature of the job (sexual offences in the case of a teacher, road-safety violations in the case of a truck driver) and may not become a "fishing expedition". The legal basis of management collecting data on employees usually has been sought in the general framework of the labor contract, such as the doctrine of subordination (the duty of employees to accept leadership of superiors) and the right of a prospective employer to ask questions. The Federal Data Protection Act of 1977 (*Bundesdatenschutzgesetz*, or FDPA) does not cover the *collection* of personal data and centers on storage, communication, modification and erasure of personal data. The BAG has consistently held, however, that the right of an employer to ask questions is restricted by the general constitutional right of protection of the personality (paras 1(1) and 2(1) of the Federal Constitution. This guarantees every German the right to human dignity. Accordingly, only those questions are permissible that relate to the workplace or the nature of the job.

What might be called the purpose principle also is an element of the FDPA, which moreover requires a broadly worded "legitimate interest" on the part of the employer in order to automatically process personal information. It has been argued that the landmark decision of the Federal Constitutional Court in the 1983 census case, proclaiming a fundamental "right of informational self-determination," makes it necessary for the government to provide more specific and statutory grounds for intrusion on the privacy of workers by their employers.[1]

Certain types of monitoring, of course, are prescribed by law: truck drivers are required to have a kind of "black box" in their cabs for purposes of road safety. The FDPA requires the establishment of access controls at computer centers. It remains an unsettled legal issue as to whether these kinds of data may be used by employers for their own purposes.

Personnel Information Systems (PIS)

Increasing use of automated data processing in personnel management has provoked growing labor concerns. The focus so far has been mainly the most widely used software package called Personnel Accounting and Information System (PAISY). It has been used by big employers such as the Opel Motor works, the German federal bank and the Bosch and AEG industries of electronic appliances. Use reportedly is rapidly spreading to hundreds of small forms.

PAISY basically is a system for managing wages and salary records. It can be expanded into a more comprehensive personnel information system (PAISY-INFO) but direct linkage to production management or control systems is not envisaged, according to the supplier.[2] Nevertheless, the specter has been raised that personnel information systems will reduce the employee to a "person of glass", as ran the headline on a story in the widely read weekly Der Spiegel (1982, No 29) that has become proverbial.

The magazine told how Volkswagen reduced its work force by computing a list of employees that were eligible for civil-defense service and turned the list over to the authorities. The military obligingly called into service quite a number of delinquent employees, easing the company's difficulties. Another firm in need of trimming its staff conducted an electronic search of its personnel files to identify employees that really were dependent upon company buses to come to work. The firm then closed down its bus service citing only reasons of economy: this obliged many women employees to resign their jobs, and the employer did not have to fire them. The story also pointed out an irony: PAISY is in use by major trade unions for their own administration, including the civil-service union OTV that has spoken out strongly against PIS. Unions also have a vested interest in effective information systems of employers, if only to be able to monitor their members' contributions, that are set at percentages of earnings. Flexibility of working conditions and work sharing——both major demands of modern unions --also call for detailed registering of workers' data, apart from the ability to identify groups of radicals and troublemakers.

Still, the German trade unions are on record strongly against PIS. After OTV had spoken out, the full DGB Congress in May 1982 registered its objections.[3] The main concern is that the systems will be used to produce "personality profiles" of employees. Accordingly, a major strategy goal is to prevent linkages of data.

The Labor Tribunal at Oberhausen, a lower court, in 1982 handed down an award in a case brought by the Works Council of Thyssen Foundry against the company.[4] This case is indicative of how labor courts interpret the scope of Works Council powers. The issue was one of the use of PAISY. The parties accepted the injunction to conclude an interim agreement stipulating that:

——the company would undertake to submit to the Works Council within 15 days a draft company agreement governing the introduction of PAISY;

——firm rules for inputting, storing, deleting, changing and transmitting data would be established;

——a protocol would be established for hardware control and access authorization;

——stored data would not be used for purposes other than those defined, without the agreement and prior information of the Works Council. The management also agreed to integrate appropriate monitoring systems;

—any extension of the use of PAISY beyond the purposes defined in the award would be submitted to co-determination proceedings.

As a result a company agreement was concluded covering the following points:

Scope The agreement applied to the use of the PAISY computer system for computing Thyssen works pensions.

Technical utilization The program will be used exclusively on the dual computer of the Thyssen EDP Center.

Data All data to be processed by PAISY will be catalogued according to defined data fields.

Use of data Data may be used only for computing works pensions; all data output will be recorded. No other retrieval, processing or output shall be permitted. Exceptions shall require authorization by the Works Council, subject to requirements of legislation, collective or company agreements. There is to be no linkage between PAISY data and those of other EDP systems, except for creating data support for banks to handle money transfers and for Thyssen to determine pension reserve allocations.

Data correction Individuals concerned may request the correction or completion of incorrect or incomplete data. Cases of doubt shall be settled by the competent pension committee.

The collection and linkage of many personal details to build an overall profile of individuals, referred to as "personality profiling", also is an anathema to data protection officials at the federal and state levels. In March 1984 the data commissioners from the 11 states, and federal commissioner Dr Reinhold Baumann, issued a statement describing data linkage for the purpose of creating personal profiles as "inadmissible for reasons of principle."[5] The 1983 census case served as the basis for this position.

It has been pointed out by the Commissioner for the State of Hessen, Professor Spiros Simitis, that personal information systems serve as "transit stations" for building dossiers on employees.[6] It has been estimated that some 75 public agencies ranging from social security to local authorities, on the basis of 232 laws and regulations, require up to 239 data elements per employee. Employers are required under 126 different regulations to keep up to 214 types of data concerning each employee.[7] These data may well be used for internal purposes, Simitis claims, in applications condemned as a violation of the purpose principle by the Conference of Data Protection Commissioners.

For Federal Commissioner Baumann a special problem is the proliferation of personal computers in human-resources management. In his 1984 annual report he describes an investigation at the federal railway system. He studied three decentralized systems, including a pilot project on the assignment of tasks in electrotechnical services which provides complete surveys of work performance and non-attendance of workers by using 54 PCs. Dr Baumann said special safeguards are needed, such as strict control of the personal details that can be retrieved by any company manager, encryptography and internal authorization to use both hard- and software.[8]

At the Opel-GM works at Rüde~~r~~sheim, 25,000 employees in 1985 signed a petition against the PAISY system, especially regarding linkage of data and building of personal profiles. The Works Council for two years had fought to obtain what was termed a "maximum of co-determination," but a labor leader warned that the Rüde~~r~~sheim system is only part of an "international monitoring of productivity and performance by Opel-GM," which involves controls on a world-wide basis. A specific concern is the use of electronic systems to change work responsibilities of highly paid engineers and scientists by storing their expertice in data bases, which according to Klaus Franz, a union official in Opel-GM, amounts to "expropriation."

VDU Monitoring

Both the West German Trade Union Federation (DGB) and individual unions such as IG Metall have been active in the international trade union movement and within FIET (the white collar international union) to set ergonomic and work-environment standards for use of VDUs. A prohibition of "machine monitoring" or "electronic monitoring" of individual workers is one of the model standards included in this programme. (See our later section on international trade union activities.)

In 1979-1980, West German unions opened a campaign to write "model codes" for VDU work into both industry-wide and plant-level agreements. A study of about 50 such agreements prepared by WSI, the research arm of the DGB, covering agreements concluded between 1978 and 1981, found that work monitoring clauses were often included. A management publication analyzing these clauses concluded:

> As regards work performance on VDUs, West German unions have expressed particular concern about the possible use of such equipment to record and measure the output of individual workers as a means of controlling performance levels. The unions have also been concerned about the increased "social isolation" of workers using VDUs for long periods of time. These two concerns have been taken up by union members on works councils with the result that plant-level agreements generally contain provisions precluding the use of VDU equipment by the employer to measure individual workers' performance levels and providing for performance targets to be set so as to allow time for necessary personal breaks and for contacts with other employees in the same department or elsewhere in the plant.

A major force in the campaign to secure such anti-monitoring clauses was the inclusion by IG Metall of that provision in its 1980 Model Agreement on use of VDUs. In Article 6, Working Conditions and Working Time, the Model Agreement states: "It shall not be permitted to monitor the performance of workers, for the purposes of measurement, control, or comparison, by use of the installed /VDU/ equipment."*

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* "West Germany: Workplace Agreements on New Technology," European Industrial Relations Review, No. 106, November, 1982, pp. 7-9.

Co-determination of technical monitoring systems

A significant feature of the FRG situation is the role of the Works Council. There is no direct statutory basis for its involvement with the introduction of PIS as such, although there are interesting sidelines. The Works Council, for example, has to be consulted in matters of "internal order" in an enterprise, and it has competence to review the questions asked of workers for job placement. It also has a general obligation to follow the implementation of laws that cover working conditions, but it took court action to establish that the FDPA comes within this category.[9]

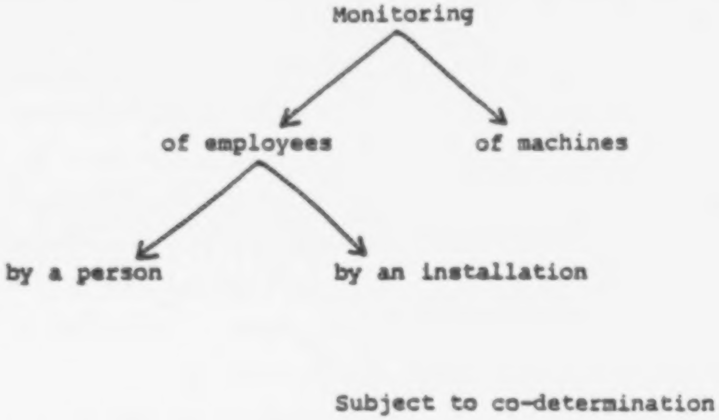
At many enterprises PISs have been made subject to a trade-union agreement.[10] But Professor Guenther Ortmann of Oldenburg University concluded from a poll that four out of ten companies felt consultation with the Works Council in these matters to be "superfluous".[11]

Involvement of the Works Council has received a substantial boost by decisions on electronic surveillance of the Supreme Labor Court in 1984-1985. At stake was the most specific statutory ground for the Works Council in these matters in the Act on the Works Constitution (para 87). It states in part:

> "1 The Works Council will, if no statutory rules or a collective bargaining agreement exist, co-determine:...The introduction and use of technical installations that are intended to monitor conduct or performance of employees."

This high-court ruling extends the power of Works Councils' co-determination with management plans and actions into the introduction and use of computers and automation equipment.

From this may be concluded that various modes of surveillance are outside the scope of co-determination. In a scheme:



When the Works Council Act was revised in 1972 it seems that parliament did not completely foresee the kind of rapid technological change that would follow. "This act was not written for computer terminals," Professor Horst Ehmann of Trier University has protested.[12] The BAG emphatically does not agree. In its so-called computer-terminal case of December 6, 1983 it decided that any system is subject to co-determination if it collects data on conduct and performance of individual employees. Whether the employer actually evaluates the data used is not relevant, only that the system may produce them. The BAG left open whether the "technical installation" should cover the complete monitoring process or suffice that it apply only to part of the processing. The latter question led to the precedent-setting Rank Xerox case, BAG, September 14, 1984, DB 1984, p 2513.

The Works Council of Rank Xerox had filed a complaint against a new reporting system for its 2,000 repairmen. They had to fill in a form with 63 details on matters such as the number of spare parts used, time spent on the job, nature of the failure (after how many copies does a machine have problems) and the personal identifying number of the repairman. These reports were fed into a computer and produced so-called Service Performance Activity Reports (SPARs) that were used to build "call profiles". The Works Council termed it "an almost perfect possibility for surveillance of conduct and performance" and claimed co-determination. The company refused, arguing that the system only served better international supplying of spare parts. Simple processing of written reports anyway does not constitute a monitoring system in terms of the law.

Basing itself on the Census Decision and quoting the "well-known dangers of modern data-processing technology for privacy," if only the "loss of context" and the danger of reducing the employee to an "object", the BAG upheld the complaint. In two later decisions it further bolstered co-determination rights on electronic surveillance. One case (BAG, April 23, 1985, Das Betrieb 1985, p 1897) involved a word-processing system in a publishing house that already was the subject of an agreement between Works Council and management. The company wanted to order VDT workers to file their names. In the so-called "header" (a data inventory) these could be combined with an indication of the processed texts. The employer said the latter could cover anything from a few syllables to part of an article without specifying. Only by adding other data could the performance of individual workers be effectively judged. The company stated it did not have the software to do so. Still, the BAG decided the system change was subject to co-determination, even if it did not fully use the monitored data.

Another case (BAG, April 23, 1985, DB 1985, p 1898) involved eight technical testing stations in northern Germany. The experts and testing personnel in their employment fill forms, with their personal identifying number which is machine-readable. A computer program then processes the data. Although this may not produce specific and final results on employee performance, the programmed processing of test data on the basis of an individual identifier does constitute "monitoring" in the sense of the Act on the Works Constitution of 1972, the court concluded.

While these decisions undoubtedly made the position of the Works Council "more effective", as the federal government has commented, this does not mean that employee representatives are in a position to block workers' surveillance.[13] If the Works Council refuses an agreement, the case is decided by an Arbitration Commission. This commission is obliged to balance the interests of the employer, which in a competitive environment may legitimately insist on monitoring workers' efficiency, to the rights of personality of individual employees. Professor Ehmann, who has chaired such a commission, indicates that criteria might be: advance warning before the introduction of the system; stating its purpose and scope; the principle audiatur et altera pars (including the right of workers to have individual circumstances——family, illness——taken into account) and time limits to the storage of data.

An early warning against automated performance controls for public service was sounded by the first Federal Data Protection Commissioner, Dr Hans-Peter Bull, in his 1981 annual report.[14] He reported a case of programmers who develop software on computer terminals. A system of automated monitoring had been put into effect to compute development costs. But it also helped to form an impression of the performance of individual programmers. The Commissioner thought it "problematical" to use data in such a way for purposes other than intended.

Bull referred to another example in a book he wrote after leaving office. Terminals were monitored to compute the efficiency of the system, such as the number of personnel needed, and to provide a safeguard against possible liability claims. After a great effort, Bull said, he was able to convince the agency concerned that efficiency statistics should and could be anonymous while data on liability should be restricted to a small circle of senior officials.[15] Bull's successor, Dr. Baumann has repeated the objections against automated performance controls.[16]

Telephone monitoring

With regard to telephone monitoring in the private sector, there have been conflicting decisions on the question of whether the telephone numbers called by workers may be recorded. A lower labor court ruled against this practice (AG Hamburg, October 10, 1984) while a superior labor court accepted it (LAG Duesseldorf, April 30, 1984).[17]

In public administration this practice has repeatedly been challenged by data protection commissioners. The federal commissioner has made a distinction between official calls and private calls by civil servants from their place of work. He spoke out against registering telephone numbers called for private purposes, and counseled utmost restraint in recording official calls. Linkage of telephone numbers with other employee data should be prohibited; all monitoring data should be erased as soon as possible.[18] The federal government, however, has refused to terminate the practice.[19]

Particularly problematical, in the opinion of the federal commissioner, are calls by worker representatives (or other people in sensitive positions, such as counseling, medical services, etc.). To protect confidentiality, numbers called by them should not be monitored. In 1984 the federal commissioner reported that in one agency, on the basis of an unwritten understanding, calls by the Personnel Council are channeled through a special conduit at the private branch exchang so that numbers called are not recorded. The commissioner expressed the hope that this would be the start of welcome developments elsewhere.

Hessen Commissioner Simitis also has held that extensive recording of numbers called by civil servants is "inadmissible". "From the point of view of the citizen," he noted, "it is hardly understandable why every call he receives from an official will entail, purely for internal-control reasons of the agency, storage of his own telephone number." Simitis warned against the possible result of of creating "telephone profiles" of both citizens and civil servants. The Hessen state government did not wish to stop the practice of recording numbers, but some local administrations have accepted Simitis' recommendations.[20]

Legislative situation

Commissioner Simitis has hailed the Rank Xerox decision as a basis for bringing all personnel information systems within the field of application of statutory co-determination. Any PIS, after all, is a "potential surveillance tool that may be activated at any moment."[21] Other observers are not so sanguine and have criticized the decision as judicial usurpation.[22]

In Hessen a formal change of the co-determination law was needed to bring about the introduction, use and extension of PIS to public administration within the scope of co-determination in the civil service. Other states have followed suit, if only for the public sector.[23]

In the private sector changes are in prospect, not because of an imminent extension of co-determination rights but because the federal government has formally committed itself to introduce legislation for the protection of employee data. In a statement of December 19, 1985 the Federal Secretary for Labor and Social Affairs confirmed an earlier remark to a parliamentary committee that "statutory rules for the protection of employee data are a necessity" and that the federal government will produce a bill in the next legislative period.[24]

The federal government, it has been officially reported, "fully recognizes that the fundamental right of informational self-determination, set forth in the Census

Decision, not only affects the public sector but also civil law, such as labor relations." The Minister warned, however, that the sensitivity of the matter "requires a very careful conception and design of the legislation." Clashes are possible with other fundamental rights, to name only one complication. There also are political difficulties. The opposition Social Democrats have introduced a bill of their own that would extend co-determination rights to personnel information systems in private enterprise and mandate appointment of the data protection officer that is called for in the FDPA. The government has not supported this legislation, to say the least, but announced it would study the matter.

The national employers' federation is fundamentally opposed to any new legislation in this field. The trade unions have welcomed it.

The federal commissioner, speaking on behalf of the Conference of Data Protection Authorities, strongly favored the legislation. He urged special attention to the following points:

1 Grounds for storage, use, change and communication of employee data should be more restricted than the "legitimate interest" of the employer that the FDPA now provides.

2 "Personal profiles", the linkage of extensive details about individuals, should be banned.

3 Access controls under the FDPA should not be used as conduct and performance controls.

4 Soft data, such as judgments on employees, should only be processed automatically under strong restrictions.

5 Medical and psychological data should be processed only in a very protected environment.

6 The existing right of access to employee files should be strengthened, in particular by allowing the release of information identifying users of the data.

7 Co-determination on the planning and introduction of automatic processing of employee data should "unequivocably" be guaranteed.

It is somewhat ironic that neither this list nor the federal government's statement addresses monitoring of employees as such. Unions are increasingly worried just about the aspect of worker surveillance alone. Witness the headline of a story in the textile workers' union magazine of November 1984: Keine Video-Spiele mit Arbeitnehmer—"No Video Games with Workers".

FRG

Notes

1 The Census Decision, BVerfG, December 15, 1983 (published i.a. in New Legal Weekly, 1984, p 419) set forth three principles: Zweckbindung (purpose principle), Normklarheit (transparency of norms) and Verhaeltnismaessigkeit (proportionality). It generally has been accepted that these principles necessitate specific legal grounds for the processing of personal data.

2 As quoted in Claus Henning Schapper and Gabriele Waniorek: On Co-Determination of the Works Council on Introduction and Use of Personal Information Systems, according to para 87(1)(6) of the Works Constitution Act 1985, No 8, p 246.

3 Data Protection Adviser, 1982, No 10.

4 Oberhauser Labor Tribunal: award of November 3, 1982, 3 pp (in German). Thysse Giesserei AG, Company Agreement on the PAISY System (Muelheim on the Ruhr), December 10, 1982, 4 pp. See also the ILO publication New Technologies: Their Impact on Employment and the Working Environment, Geneva, 1985, p 109.

5 Data Protection Adviser, 1984, No 6. The Federal Data Protection Commissioner calls for a complete ban on his second Annual Report of January 1, 1980, Bfd 2 4.3.5, and has repeated this in his most recent report, issued in July 1986, Bfd 8 Taetigkeitsbericht 5.2.4.

6 Spiros Simitis Legal Rules for Personal Information Systems, Chances and Limits, Wiesbaden, August 1984.

7 *Data Protection Adviser*, 1983, No 11.

8 Annual Report of 1985.

9 Hans-Christoph Matthes *Participation of the Works Council in Measures for the Processing of Data on Personnel and Overview*, Law and Data Processing 1985, No 1-2. Spiros Simitis *Co-determination as a Regulatory Element in a Technological Control of Employees*, New Legal Weekly 1985, No 8.

10 Simitis, *op cit* No 6.

11 Weekley newspaper, *Rheinische Merkur/Christ und Welt*, No 46, November 16, 1984.

12 Horst Ehmann "Technical Monitoring of Employees and Data Security" in *Testimonial Book for Hilder and Stumpf* (Munich, 1983).

13 Stefan Walz "Data Protection and Co-determination, a Reform Debate on Personnel Information Systems", *Labor and Law*, August 1985, No 8. See also Matthes, *op cit* No 9.

14 Bfd 3 Third Annual Report on the year 1980 (1.1.1981) 3.5.5.4.

15 Hans-Peter Bull *Data Protection or Fear of the Computer* (Munich, 1984), p 162.

16 Bfd 8 Eigth Annual Report on the year 1985 (1.1.1986) 5.2.2.

17 Hans H Wohlgemuth "Selected Problems of Employee Data Protection", *Labor and Law*, August 1985, No 8.

18 Bfd 3 Third Annual Report on the year 1980 (1.1.1981) 3.5.5.2, and Bfd 7 Seventh Annual Report on the year 1984 (1.1.1985) 7.2.3.

19 Bfd 6 Sixth Annual Report on the year 1983 (1.1.1984) 5.4.3.

20 Data Protection Commissioner for the State of Hessen, Eleventh Annual Report on the year 1982 (31.12.1982) 2.2.2.

21 Spiros Simitis, op cit No 6.

22 Reader's Letter, Datenschutz-Berater, 1985, No 4.

23 See Walz, op cit No 13.

24 German Federal Parliament, Drucksache 10/4594.

25 Bfd 8 Taetigkeitsbericht (1.1.1986) 5.2.4.

EXAMPLE OF A WEST-GERMAN UNION-MANAGEMENT EMPLOYEE SURVEILLANCE AGREEMENT

In 1984 the Commerzbank AG of Frankfurt and the Union for Commerce, Banks and Insurance (HBV) entered into an agreement on the conduct and limits to electronic monitoring of bank employees. It is representative of the provisions that trade unions in the Federal Republic of Germany seek to negotiate with employers.

The following is hereby agreed upon with respect to the possibility that EDP provides of supervising the behaviour and performance of employees:

A. Data storage and the use of programs

1. The performance or behaviour of employees shall not be effected by means of existing or planned EDP systems. Data and programs which serve to verify performance or behaviour shall be erased.

2. Only such data on employees shall be stored as is absolutely essential for work planning. The Bank shall include all such data in an Annex 1 to this Agreement, stating the use to which they will be put and the reason why they are necessary. The Annex shall also make mention of set periods or events after which the date is to be erased. Data shall, furthermore, be examined at yearly intervals to see whether they are still required or whether they can be erased.

3. A guarantee shall be given that personal data on the employees which are a by-product of the working process or which can be deduced from work process data (such as data from the use of identity document readers, short codes, log data, user statistics, EDP utilization statistics, etc.) will not be such as can be used or interpreted as a check on personnel behaviour or performance.

4. Personal data on employees shall not be coupled with data such as is referred to in §§ 3 above. Personal data on employees may be disclosed only in the cases prescribed by Law and, in such cases, the recipient, the reason for the disclosure and the date of disclosure shall be stated in detail. GBR shall be informed of each single or irregular disclosure of data.

FIET Newsletter
May 1986

FRG: HBV'S MODEL SETTLEMENT ON PERSONNEL DATA SYSTEMS

Following the intervention of the Conciliation Board, a model settlement has been reached between the German insurance company Deutscher Herold and FIET affiliate HBV concerning the operation of the personnel data collection and processing system PAISY. Initial attempts to reach an agreement had been blocked by the refusal of the company to recognise the union's codetermination rights in this field, which was the subject of a FIET Conference in October 1985.

The agreement provides that personnel information can only be collected by the company for limited and specified purposes, such as salary accounting, rent payments and insurance premiums. Statistics drawn from this information can then be used only if they are aggregated and unattributable to individual employees. All operations carried out by the system must be recorded, and the works council has the right to call in lawyers or data experts to examine all aspects of the working of the system without informing the company, and at the company's expense. In addition, the system cannot be extended without the agreement of the works council, or through a further decision of the Conciliation Board.

The importance which employees attribute to this issue may be judged from the fact that a meeting to discuss the terms of the agreement led directly to ten new members of the workforce joining the HBV.

5. The Bank shall, in Annex 2 to be drawn up to this Agreement, mention and briefly describe the program which is to be used for the personalized processing of employee data. This program shall, when put on line and at least once a year on a random basis, be checked for accuracy by a data protection officer or a neutral EDP specialist. The GBR shall receive a copy of the test report. Any addition to Annex 2 shall require the approval of the GBR. No programs shall be set up or run to adjust job profiles, to analyse dead time or compare performances. Exceptions shall be permitted only with the agreement of GBR.

6. Once only or irregular use of programs to evaluate personal employee data (statistics, meter readings, etc.) shall likewise require the approval of the GBR.

7. The agreements on the use of programs shall apply as appropriate to the use of information languages, dialogue interrogation methods, etc.

8. Recording and verification

1. All data runs relating to individuals shall be recorded. A print-off of the record shall, on request, be sent to the GBR.

2. Entitlement to access data relating to individuals shall be regulated by both organisational and technical programming methods. Access entitlement shall be conferred on a stage-by-stage basis and shall be kept to an absolute minimum. The GBR shall have a list of all persons who, at any given time, have access entitlement. Unjustified access or attempted access shall be recorded and immediately reported to the GBR and employees shall be entitled to report suspected or actual infringements to the GBR or the shop steward.

3. Personnel measures based on information obtained through a culpable breach of the agreement here reached, shall be fundamentally ineffective.

4. Each employee shall, once every 3 years, receive a complete list of all data stored in the personnel data bank and relating to himself.

Should the employee object to any data, the Company shall immediately effect the necessary corrections unless it can prove the accuracy of the data on record.

Claims may at any time be brought requesting information except in cases of abuse of entitlement.

The employee shall be informed of any data communicated to third parties and shall be informed of the entitlement of such parties to access that data and the use to which they intend to put it. The office or department to which the data is communicated is also to be named. The only exception to this rule shall be bulk data supplied for statistical purposes (i.e. not identifying and individual).

C. Training and Staff information system

1. To ensure that members of the GBR fully understand the rights and obligations created by this Agreement, they may participate in EDP training courses which will provide them with a sufficiency of the qualifications requi The cost of such courses shall be borne by the employer.

2. The agreement of the GBR shall be required in order that the IPAS Personnel Information System may be introduced. Should the Parties be unable to reach agreement, the conciliation board shall, here too, decide.

NORWAY

Norway is traditionally a society characterized by the term "welfare state". After the second world war a long period of predominant social-democratic government emphasized the conditions of workers and employees. Former coalition composed of the Conservative Party, Christian Democrats and small parties was not in disagreement over the major objectives of social policy. Also, this coalition supported the goals of a welfare state. This is expected to be continued by the present Labor Party government.

The Social Democratic party (Arbeiderpartiet) has a long tradition of cooperation with the national union (Landsorganisasjonen, or simply LO). Consequently, there has been a strong influence from the unions on government policy. This is also reflected in the national organizations of employers and employees.

The employers are organized in a national organization (Norges arbeidsgiverforbund, or NAF). There is no obligation to be a member of this organization for an employer and there are other organizations of employers. But these are minor——in practice the NAF is the central organization of employers with substantial power to direct th strategies to be followed in negotiations by its member organizations with the trade unions. The major exception is the government, which is of course a major employer which negotiates separate agreements with organizations of the employees.

Employees and workers have traditionally been organized in LO, which is composed of number of trade- or industry-related unions. This is a very strong organization indeed, and most employees will participate in their relevant union. LO has traditionally maintained a close relationship with the Social Democratic party, for instance through collective membership agreements. This political affiliation has recently become slightly more controversial and a separate national union, Yrkesorganisasjonenenes Sentralforbund, or YS. Some characterize LO as a blue-collar and YS as a white-collar organization——though there are numerous exceptions and this can be disputed.

Relations between organizations of employers and employees are maintained on several levels. The national unions enter into general agreements on working conditions and wages. The national trade- or industry-related organizations of both employers and employees enter into more detailed agreements. And the individual employer will negotiate a local agreement with the local union.

These relations are generally characterized as cooperative in nature. There are few wildcat strikes or unauthorized industrial actions in Norway. The system of negotiations is very much an integrated part of the political system. Government will refrain from intervening in a legal conflict until vital social interests are at stake, but will often try to encourage communication and negotiations between the parties to a conflict. The Act on Workers' Protection and the Working Environment of 1977 governs relations between employers and employees. The act contains principles setting limits to employer controls, standards for work environment, etc. The Directorate for Labor Inspection (DLI) is empowered to enforce the act.

Worker surveillance---pre-high technology

Surveillance would be defined as an action taken by an employer which in principle could be subject to actions by the local union or which might be referred to the DLI. Work environment is a general term including physical and psychological elements. Surveillance consequently has an impact on the occupational environment, and therefore comes within the authority the DLI and the local institutions. In companies employing more than 50 employees, a special occupational environment committee is to be established with equal representation of employer and employees, and reporting to the local branch of the DLI. In all companies with more than five employees a special ombudsman also is nominated among the employees with special responsibilities for their occupational environment.

This structure is defined by the Employee Protection Act but has been developed over the past several decades. Many institutions and procedures have been introduced through the general agreements before being codified by parliamentary acts. Therefore, there have been organizations like the DLI with administrative responsibilities to respond to surveillance issues before the introduction of advanced information technology. Individual cases of surveillance have taken place, but these have not been formally reported.

Polygraph tests definitely have not been in use. This is not due to a prohibition but is because employers have never suggested using them. The introduction of polygraph tests at any time would have been met by a massive reaction from employee organizations and would not have been politically feasible. Psychological testing may have been in use for some very-special-purpose jobs, but then on the basis of medical examination rather than screening of actual or prospective employees. Telephone monitoring for purposes other than debiting also would have been a violation of the general penal provisions on wiretapping.

Awareness of surveillance may be said to have been rather low before the introduction of advanced information technology. Therefore, specific provisions to control any early actions cannot easily be identified. But the system of general labor agreement and government controls would have been adequate to handle any specific instance of excessive control measures——which would have been opposed by those enforcing established norms. For these reasons employers were discouraged from introducing surveillance methods. Consequently, none can be reported.

In assessing this situation, it should be borne in mind that Norway is a small and extremely open society. A system of personal identification numbers has been introduced, making identification and tracing of an individual rather efficient. Tax assessments are publicly available; access to other government files is quite easy as well. Therefore, it may be maintained that surveillance for screening purposes, identification of political affiliation, general personality profile, etc., may not be a need strongly felt by employers.

Current Surveillance situation

Worker surveillance is currently regulated in several ways. Firstly, the general labor agreement between LO and NAF of 1975, as amended (Section 6 No 7) provides for discussions of internal control measures——the need for such measures, their introduction and design. The general agreement refers to a supplemental agreement on internal control measures. This provides for supplying information to employees and their elected representatives who shall have a right to comment on such proposed measures (Section 3). They have to be clearly necessary and not excessive with respect to the actual requirements of the organization (Section 11). All employees or groups of employees must be equally treated with regard to any controls instituted.

The extent to which the control involves the storage or use of personal data, the period for storage, the data-security measures and erasure routines also should be discussed and defined, according to the agreement. This is in reference to the

Data Protection Act of 1978, and subsidiary regulations. There is an interesting interrelationship between the act and the labor agreements, as the regulation on employee data systems (Sections 2-12) is explicitly referred to in this agreement. The regulations specify 22 categories of personal data permitted in employee systems, but make a general extension provided this is authorized either by an act of parliament or general agreements between the organizations of employers and employees.

In addition to the agreements and the data protection legislation, the DLI has authority as far as the occupational environment is concerned. Frequently, the Data Inspectorate which supervises the Data Protection Act, and the DLI each may have authority to intervene. There are indications that the employee representatives prefer to seek help from the DLI, probably as this is traditionally the institution most closely related to the situation of the employees.

There is some information on the regulation in local labor agreements on inclusion of personal data for control purposes.[1] A common phrase in such agreements is the following (Borchgrevink 1985:375):

> "Establishment and destruction of data systems facilitating a detailed control and surveillance of the individual employee in the person's working situation shall not take place without the cooperation of the organization of the employees."

A general agreement between the government and organizations of employees regulates the categories of "no show" which are permitted——"illness", "holiday", "leave" and other "no show" (which include military service, travel, non-authorized leaves, etc.).

Union of Metal Workers initiative

One cannot review the current Norwegian situation with respect to advanced technology and employee participation without mentioning the initiative which has become known as the project of the Union of Metal Workers. This union is the largest in Norway. As computerization of works and shipyards has taken place, the impact of new technology has been significantly felt. In view of the importance of these developments, Professor Kristen Nygaard of the Norwegian Computing Center, cooperating with the union, funded a project to analyze this impact and suggest strategies for relating to them.[2] This project was initiated in the early 70s, and resulted in a massive education of union representatives, a general awareness of the issue in the National Union and eventually a cooperative project with NAF. Based on examples from a number of local agreements (the earliest for 1972), a national general labor agreement on the introduction of advanced technology was reached in 1975. The principles embodied in this agreement were codified in the Employee Protection Act 1977 as Section 12(3):

> "Special regulation of planning and control systems
> The employees or their elected representatives shall be informed on systems used for planning and in the work process, including planned changes in such systems. They shall have the training necessary to understand the system, and they shall take part in the design of the systems."

In 1972 the first "computer system representative" was elected. In many companies there are local representatives with a special responsibility for discussing and analyzing the computer systems from the perspective of employee well being. As early as 1970-1971 there were examples of local unions taking an interest in elements of computerized systems which might be utilized for a control of the employees. An example is the local union of Kongsberg Vapenfabrikk, a major producer of arms systems, gas generators and special-purpose computer equipment. They were using a management system which generated management data on the output of the different work stations. The local union argued for a redesign of the systems, which actually led to the development of a customized in-house system to replace the standard system then in use.

There is no information known to exist on location monitoring of employees beyond time card check-in procedures.

Telephone monitoring

Regulations pursuant to the Data Protection Act do not permit the establishment of telephone-monitoring systems—i.e. systems which will record the number of the subscriber to which a call is made. There are two general exceptions, however

(Borchgrevink 1985:288-290). Firstly, the Data Inspectorate has licensed hotels to record telephone numbers from rooms of the guests. It should be emphasized that a corresponding license to record the calls made from the rooms or work stations of employees was not permitted. Secondly, the Inspectorate has licensed recording of calls made from some shipowners. The shipowners charge the expenses to certain customers and these have required specifications. The license authorizes the recording of certain numbers required by customers, but not other numbers. It is implied that the same reason may be an argument for licensing the recording of numbers by private attorneys, consultants, travel agencies, etc.——but such agencies have not as yet applied.

Productivity monitoring

As the Union of Metal Workers early on took part in the development of strategies with respect to computerized systems, one will find that there are in this respect several examples of agreements determining the monitoring functions of such equipment.

An example involves a protocol on the use of a log of a CNC (Computer Numeric Control) machine for a workshop. In this protocol a number of functions were recorded——error correction, reprogramming (testing), re-equipping, maintenance, waiting time, engine polishing and down time. "Waiting time" and "down time" may be exploited for operator surveillance. The protocol states that: "The log shall not be used in surveillance of the operator of the machine." In this case the equipment used also was decided to be undesirable, and was to be returned to the manufacturer at the end of the one-year guarantee period.

Another case involving the same type of equipment resulted in the protocol stating that the recording equipment only is to be used for a limited period of one year, and the recorded data are not to be utilized for surveillance (Bortchgrevink 1985:286).

In another case a company purchased a printing press, and negotiated agreement with the organizations of employees in the normal way. The printing equipment, however, contained a device for continuous recording of its operation. This was beyond the agreed terms and the purchase had to be considered in the light of the special computer and control agreements. The equipment remained out of operation until satisfactory terms were reached.

In still another case a hotel used a device that could be plugged into a recording unit while rooms were being cleaned. The receptionist would then be able to see when a room was ready for check-in of a new guest. It did, however, also record the time used in cleaning a room. No local agreement on the practice has been negotiated.[3]

A recent survey by FIET produced the following report from the bank union in Norway:

> The bank union has included in its technology agreement regulations to control the collection of personal information. For example information on work volume may only be collected at the level of the work groups and not of the individual employee. Teller terminals in the banks provide a great deal of information on work speeds etc., but local regulations laid down under the collective agreement are designed to ensure that such information is not used to evaluate employees. The union points out that the only way to assess the impact on employment and working conditions of new technologies such as EFTPOS is by using such work measurement devices. However the union stresses the importance of controlling the use to which the information is put.

Following this summary, we reproduce an article from the November, 1982 European Industrial Relations Review that contains both a useful historical summary on the Norwegian development of data protection in the workplace and an example of a technology agreement negotiated by the Norwegian Lift Installers Union.

Video surveillance

Video surveillance and systematic storage of video records is regulated in the general agreement between LO and NAF (Section 6 No 7). Introduction of such equipment is to be negotiated by the local parties according to the provisions in the general agreement and the supplemental understandings on surveillance. The general agreement has special conditions for direct and continuous video surveillance. The purpose and need for such surveillance is defined as:

> "Such surveillance is to be avoided when possible, and the requirement of relevance in the Data Protection Act is to be applied. Systematic storage by video, etc., is to be limited by the Data Protection Act."

The reference to the Data Protection Act is significant because it is by no means obvious that such registers would qualify under the concepts defining the scope of the act.

There is a case decided by the Data Inspectorate where cameras surveyed a certain sector of the area in which a company had its business. The resulting video recording could later be screened. The Union of Metal Workers maintained that the Data Protection Act applied to this system. The Data Inspectorate decided that the video recording contained personal data, but that the criteria in the act for individual retrievability were not met. If the camera surveyed certain work stations, or an index to the resulting recordings was established, the recordings would be subject to the law. Otherwise, the act has doubtful jurisdiction.

Use of employee records for surveillance

Agreements in the banking sector have been negotiated on the collection of work statistics. These data should not be individualized. Plans for the introduction of such systems must be presented to elected representatives of the employees who may refuse to authorize them. Similar examples may be found in local agreements in newspaper unions, where it is stated that "the system shall not function as personnel surveillance in any sector."

A recent example has emerged during the introduction of computerized case-handling systems for the social-security administration.[4] Such a massive computerization of a major government bureaucracy will obviously have organizational consequences. In order to collect information on work procedures, manual time measurement took place until 1984. At that time, the unions for the employees rejected these measurements.

There is general consensus on the objectives of the computerization of social-insurance institutions. But there is disagreement on the effect of rationalization. In order to prove their point, the unions of the employees agreed in 1984 to initiate a pilot project in cooperation with a semi-public computer bureau, the East Region Computer Office (KDØ). This office introduced a terminal-based time-measurement system. In November 1985 agreements were reached to extend this scheme to a large number of social-security offices. The system produces each day work statistics, which are also available to the representatives of trade unions and management alike. The data are not to be exploited as organizational management data until further agreements are reached.

This last example illustrates how detailed data on the individual employee is collected, but such information may be used only in aggregates for organizational development. The trade unions have voiced this position to counter the employer supporting theoretical arguments on rationalization effects with empirical data on actual case management.

Norway

Notes

1 This and further examples in this paper are based on Mette Borchgrevink Ny teknologi i arbeidslivet, Norwegian University Press, 1985. For this book Borchgrevink was awarded a lic jur degree. The book is the result of a project at the NRCCL, supported by the Norwegian Research Council for Science and the Humanities.

2 The project is documented in Kristen Bygarrd/Olav Terje Bergo Planlegging, styring og databehandling, Tiden, 1974 (two volumes).

3 Borchgrevink, op cit, 374-375, 285-290.

4 This example is discussed in an unpublished report by Dag Wiese Schartum, who is directing the project NORIS (70) "Work process, information technology and service quality in social-welfare institutions", a project financed by the Stiftung Volkswagenwerk and in cooperation with Wissenschaftzentrum Berlin and the London School of Economics and Political Science.

From: European Industrial Relations Review, No. 166, Nov. 198–

NORWAY

New technology and data protection

Whereas the job security consequences of new technology have become a feature of collective bargaining in several West European countries in recent years, in Norway, where unemployment continues to remain relatively low (around 2.5% currently), the data protection aspects of new technology have also been given considerable attention.

In this article, we show how unions and employers in Norway have adapted to the advent of new technology as it affects industrial relations, and examine the role of legislation in this field.

The central agreement

Historically, the first attempt to regulate new technology issues in any global way in Norway occurred in 1975, with a central framework agreement between the country's main private-sector employers' organization, NAF, and Norway's largest union confederation LO – EIRR 68, etc. This agreement which, like all collective agreements in Norway, is legally binding, was last revised by the signatory parties in March 1982. Since this date, the agreement has been enshrined in Norway's latest Basic Agreement between NAF and LO, which lays down the basic ground-rules for industrial relations in Norway (EIRR 101).

The new technology agreement or, more precisely, the framework agreement on "technological development and computer-based systems", covers computerized systems used for planning and carrying out work, as well as those used for data storage and the use of personal data – ie "all data which either by name or by other identifying code may be traced back to physical persons employed by the individual undertaking".

The agreement acknowledges that the introduction of new technology can affect working and employment conditions, so that before any data-based system is introduced it must be evaluated from a social as well as a technical and economic standpoint. Consequently, company managements are required to inform union shop stewards on prospective changes, and this information must be given "clearly and in a language easily understood by persons without knowledge of the area concerned". Both managements and shop stewards are given the duty of involving employees directly in the process of evaluating changes arising from new technology, so that they can "gain insight into and understand the fundamental features of the systems which they themselves either use or are affected by ..." Furthermore, NAF and LO "recommend" direct employee involvement in any project work to introduce a data-based system, so that "use may be made of available knowledge in all parts of the undertaking" and the greatest level of employee influence may be achieved."

Another feature of this agreement is that it provides for existing shop stewards to specialize in new technology issues. These individuals have rights to paid time off to read relevant documentation, discuss issues with employees and participate in company-run training courses on new technology, including systems design. (These provisions complement those enshrined in Norway's 1977 Working Environment Act (EIRR 37 et al), which grants employees and their representatives general statutory rights to be informed about systems used for planning and controlling work and to be given any necessary training to operate and help in designing such systems.)

On privacy and data protection, the agreement states that "collection, storage, processing and use of personal data shall not take place unless due consideration is given to the activities of the undertaking. In each undertaking, it shall be made clear what type of personal data should be collected, stored, processed and used via a computer-based system". The agreement adds that negotiations should take place at undertaking level with a view to securing a collective agreement between management and shop stewards on the use of personal data. Failing any such agreement, the matter may be submitted to NAF and LO at central level for resolution.

Statutory back-up

These particular provisions on data protection appeared in the original central framework agreement of 1975 and have remained basically unaltered since then. In 1978, however, the Norwegian Parliament adopted an Act on personal data registers which introduced certain statutory restrictions on their content and use. These safeguards apply to all sectors of the Norwegian economy (ie not just the private sector as is the case with the NAF/LO agreement) and to all personal registers, whether computerized or manual.

This Act, which took effect in 1980, established a State-run Data Inspectorate to monitor the use of personal files; keep a record of any such files on a central register; and issue permits for the establishment of all computer-based personal files. The Act states that for the registration of personal information to be justified on "objective grounds", consideration must be given to "the administrative and operational activities of the institution or undertaking carrying out such registration". Certain types of information are generally prohibited from being registered – including information concerning a person's race, political or religious beliefs, criminal convictions, state of health, and sexual activities

Where information is stored on a computer, the individual concerned has a right to be informed of the type of data being stored. This right is extended to cover manual as well as computerized files, where such files are stored by central or local Government institutions. The Data Inspectorate has powers to order the correction, deletion or supplementing of any erroneous information.

The Act also contains special rules regulating the activities of organizations which specialize in providing information on individual credit-worthiness or financial reliability; and organizations which specialize in data processing, addressing and distribution, and opinion polls and market research.

Failure to comply with any of these statutory rules can lead to up to one year's imprisonment and/or a fine – the level of which is not specified in the Act but will vary according to the circumstances of the case.

Local bargaining

In addition to this network of statutory provisions and centrally-agreed rules on new technology, numerous private-sector firms in Norway have negotiated local agreements with unions on data protection – as specifically provided for in the NAF/LO central framework agreement. A wide range of firms are covered by such arrangements including Viking-Askim, which manufactures chemical products, and the Kongsberg arms factory. It is not possible to tell how many local agreements have actually been signed, however, since neither NAF nor LO require their member organizations to register agreements centrally: neither is this a Labour Ministry function. On the other hand, NAF organizes some 9000 firms – a clear indication of the maximum number of local agreements that may have been signed on this issue.

The Reber Schindler case

A typical local agreement on data protection was recently concluded between management and shop stewards at the lift and escalator manufacturing and maintenance firm Reber Schindler Heis, based in Kristiansand in Southern Norway. Below we discuss briefly the background to and contents of this agreement – formally entitled "Directions for compilation and use of personal data". The full text of the agreement appears in the accompanying box.

Reber Schindler began operations in Norway in 1946. It is part of a Swiss-owned company and today employs 280 people. Towards the end of 1981, management decided to install a computer, to take over many of the control and planning functions previously carried out manually and, at the same time, to transfer much of the personal information on its employees, previously stored in classical written form, to computerized files. (The manual files had been checked in 1980 to ensure that they did not contain any proscribed information as laid down under the Act on personal data registers – see above.)

In line with its commitments as a NAF member firm under the central framework agreement, Reber Schindler management then began negotiations with shop stewards from the country's Lift Installers' Union (which represents most of the firm's employees). The aim of the negotiations was to conclude an agreement on how personal data could best be processed automatically and what safeguards should be introduced about its uses, regardless of form.

According to company management and shop stewards, the negotiations spanned a period of some six months – largely because more pressing day-to-day concerns were given priority – and the final agreement materialized towards the end of March 1982.

The agreement states that personal data registration will only be permitted so long as it is considered "reasonable" in the context of the company's activities and the law. Thus, for instance, agreement was reached that information on an employee's educational background should only be stored where the courses and qualifications were "relevant" to the job. In any event, the use to which any personal data may be put is subject to prior discussions between company management and local union officials. The agreement also covers safeguards to ensure the confidentiality of information. These include limiting information access to specific authorized individuals, so that where automatically processed data is involved, only those authorized persons "shall know the system keys for necessary access". The agreement also deals with the statutory rules on individual rights – eg to check information for errors, etc.☐

Directions for the use of personal data: Agreement of 22 March 1982 between Reber Schindler Heis A/S and the Norwegian Lift Installers Union

1. Introduction

The directions build upon:

1. The Act on Personal Registers, etc of 9 June 1978, together with associated provisions.
2. The Basic Agreement between LO and NAF [union and employer confederations respectively – EIRR 101].
3. The framework agreement between LO and NAF on technological development and data-based systems.
4. The Working Environment Act [EIRR 37].

2. Scope

These directions regulate compilation, storage, working with, and use of personal data within the company. By personal data is meant information and assessments which may directly or indirectly be connected with identifiable individuals in the company. The agreement applies to personal data irrespective of its method of compilation, use, or form of storage.

3. Objectives

Registration of personal data shall only be undertaken where there is a reasonable basis for so doing, having regard to the company's administration and activities, or what is permissible under Norwegian law.

The objective of the company's storage and use of personal information shall be discussed with the local union branches. Where there is a demand or a wish on the part of the company, the local branches, or the Government, for alterations to, or extension of, the scope of the registers, the purpose and area of use shall be discussed with the local union branches.

4. Compilation, use, storage

Discussions shall be held with the local union branches on the procedures to be followed in the event of the company compiling, using, storing and supplying personal information.

All compilation, use and storage shall be carried out in such a way that all employees or groups of employees receive equal treatment.

5. Control

The company and the local union branches shall co-operate in order to avoid personal information being abused. In this respect, the following guidelines shall apply:

All personal data, irrespective of its form of storage, shall be treated as confidential information under the company's rules for confidential documents.

The type of personal data to be compiled, stored, worked on, and used, shall be discussed with the local union branches.

Lists and circulars with personal data shall only be requested by, and supplied to, persons who have been specially authorized. Any individual with special authority to receive such lists and circulars shall be responsible for these not being disclosed to unauthorized persons.

As regards personal information which is accessible by way of data terminals or equivalent machine methods, only specially authorized persons shall know the system keys for necessary access. Such authorized persons shall be placed under a duty of confidentiality.

The company shall exercize continuous supervision of all registers which contain personal data and over the information which is contained therein, as well as over who has access to the various reports/registers. In the event of actual alterations, the lists shall be brought up to date immediately. The local union branches shall have a copy of these summaries.

6. Awareness right

Each individual employee shall have a right, on request, to be informed as to what information about himself is stored in the registers. For more detailed methods of access, reference should be made to section 7 of the Act on Personal Registers [concerning the individual's right of access] and to sections 1 to 5 of the provisions [concerning the scope of the Act and the Data Inspectorate's rights and duties].

In the event of any error, the registration shall be rectified immediately, and an extract from the new registration shall be sent, without the need for a request to be made, to the person concerned for checking.

7. Updating, erasing, destroying

Procedures for bringing the registers up to date shall be discussed with the local union branches. The individual shall be sent an extract of his own data for checking and possible correction.

Unless the company is bound by any Act, provision, or agreement, or by any other time limit, personal data on individuals who have ceased to be its employees shall be disposed of not later than the expiry of the following calendar year.

Reports from registers which have lost their currency, shall immediately be destroyed. This applies particularly to automatically processed lists which are produced periodically, and where previous lists are no longer of value.

8. Transitional provisions

Representatives of the management of the company and of the local union branches shall undertake an inventory of all personal registers in the company.

The need for each individual register shall be assessed.

The same shall apply in respect of the need for the items of data contained therein. Any data which is not considered necessary shall immediately be disposed of/destroyed.

9. Questions of interpretation

If disagreement arises between the parties at the company over how these directions are to be interpreted or their scope, either party may refer the matter to its central organization. The Data Inspectorate may also, in certain instances, be called in where problems of interpretation are concerned.

FRANCE

Automatic monitoring of telephone calls, especially recording the numbers being called, has been repeatedly brought to the attention of the National Commission on Informatics and Liberties (CNIL), by individuals, trade unions, and in some cases employers. There is a difference of opinion on the nature of the practice, because the former fear intrusion of their privacy and the latter want to know the limits of such surveillance. Data collected are considered "indirectly nominative" which obliges government agencies to issue privacy regulations before putting telephone monitoring devices into use. The CNIL must be consulted during the preparation of these regulations. Private companies, however, are only obliged to notify the CNIL that they have introduced such monitoring.

On January 21, 1981 the French Supreme Court in the "Malherbert" case issued a ruling on listening-in on telephone conversations by the director of the staff of a half-way house for young workers. It deemed the practice a violation of human rights. This decision has influenced telephone listening practices in France.

The metal workers union (CFDT) in 1981 objected to the use of electronic badges used in IBM plants, called Access Control Enhancement Program (ACEP). Union representatives challenged the program because it could be used not only for access to the parking lot and machine rooms, but also for other purposes. IBM management insisted that only "anomolies" like people trying to get unauthorized access to locations or people who would like to get access to the plant outside of normal working hours would be affected. The union was unconvinced, press accounts suggest, because they said people sometimes arrive late or are delayed in getting to work and these situations could be identified and used against the particular worker involved.

In 1982 the CNIL was asked its opinion on automated invoicing systems initiated by the PTT for household and office telephones. The CNIL is involved in computer monitoring and computer aided decisions because of Article 2 of the Act under which it is established. Article 2 states: "No governmental or private decision involving an appraisal of human conduct may be based solely on any automatic processing of data which describes the profile or personality of the person concerned." The CNIL recommended that only part of the telephone number called should be recorded to enable proper invoicing but not revealing too extensive details about the calls. The Commission noted, however, that systems involved in checking whether private conversations are recorded in the working place are difficult to judge. In a Recommendation 84/31 of September 18, 1984 the CNIL set forth its views on this type of practice:

1. Works Councils should be consulted in accordance with Sec. L-432, 2 of the Labor Code;

2. Employees should be informed on (a) the nature and frequency of monitoring; (b) conditions under which private calls must be paid for; and (c) their access rights under the data protection act;

3. There are to be strict limits on data stored, so that data are not kept longer than for invoicing nor used for other purposes; and

4. Special attention should be paid to the rights of employees and representatives of Works Councils and trade unions (because companies tend to be listening to calls made by Works Council members or from their offices). Employee rights were established in the Act on Workers' Freedoms and Co-determination of 1982.

Union concerns were described in the CNIL's 1982 Annual Report with regard to the use of questionnaires to collect data on company personnel. The USINOR steelworks in northern France sought to reduce its staff, in particular some underqualified personnel. The company distributed questionnaires to these employees asking about their family situation, hobbies and their ambitions as well as their "social capabilities." Those employees unable to competently complete the forms were terminated. Trade unions complained to the CNIL but the Commission said it didn't have jurisdiction because computer processing was not involved. The CNIL urged USINOR's management, however, to give special consideration to this type of activity, especially try to establish union-management discussions before such programs are implemented.

In 1984 in its Annual Report (page 112) the CNIL referred to a case involving the national railway system (SCNF) which had been authorized by the Commission to monitor employee telephone calls. The CNIL emphasized it recommended that such monitoring should be publically known, personnel should be directly informed, profiles and practices should not be prepared, and monitoring must be random, not systematic.

THE NETHERLANDS

Video System Monitoring Production Personnel

A district court in Holland in 1985 issued an injunction against installation of a video system for monitoring production personnel. The case was brought by the FNV trade union of industrial workers against Koma, a highly specialized firm producing refrigerating machinery. It was planning to install the video system in all its 18 production departments after a successful experiment to link an outside production hall to central facilities. The Workers' Council did not complain, but the trade union protested after finding out that many employees objected to being watched. Management argued that the purpose of the system was not "surveillance" but "guidance" and "help". The acting president of the District Court of Roermond was not impressed. He noted that the purpose of the video system was unclear and that consultation of the Workers' Council had been a mere formality. So the presiding judge ordered the system stopped until a full court case on the merits has been decided or parties concerned have reached a comprehensive agreement. This could be part of a collective bargaining agreement, as had been suggested in court, but the judge warned that any collective formula should pay due respect to the fundamental right of privacy as an individual right. "One of the characteristics (of this) is that a majority cannot deny an individual or a minority a claim to this right."

The decision of the Roermond court opened up new legal ground. The government privacy bill in the Dutch parliament does not address such surveillance methods. The court said that surveillance of employees by employers in their work will not be felt as an invasion of privacy as long as it entails personal contact. "Privacy protection extends to the workplace," the court added. Of course, the personal right is not absolute and will have to be balanced against other values such as safety at work, environmental considerations, efficiency. But this should not be done without due agreement with the employees on the use of the system and safeguards.

Source: Arrondissementsrechtbank te Roermond KG 134/1985.

Telephone Monitoring

As early as 1977 there were questions in the Dutch lower house of parliament concerning the leasing of telephone monitoring equipment to private companies by the PTT. The Secretary of State for the PTT defended the practice as did the Minister of Justice. They justified this practice because it was mainly for use by small firms. Three acceptable reasons were advanced: (1) monitoring the (technical) quality of calls with external business relations; (2) preventing misuse of telephone facilities such as use for private calls by employees; and (3) assisting company executives to listen-in on certain calls (concerning arrangements and contracts with other companies) to "witness" what is said. The PTT might warn employers that there are privacy risks connected with this kind of system, the Secretary of State noted. The Minister of Justice referred to a criminal code provision against telephone eavesdropping but indicated this constitutes an exception because employers have a legal interest in these conversations as they are placed on their equipment. However, the Minister said the decent thing to do would be to inform employees of this practice.

Electronic Passes

The issuance of electronic passes to Rotterdam harbor workers has been a controversial action. Before they were introduced there had been "moonlighting" on the docks by some non-union workers. In February, 1986, employers and workers reached an agreement for an electronic pass system to be introduced. Members of the Transport Union initially thought the pass might be used to check the time of arrival and departures of trucks. The employers actually did not like the system because it would lead to accusations of invasion of privacy. Nevertheless, the union called for implementation of the pass plan because it had negotiated a strong agreement guaranteeing their members jobs. Consequently, it wanted the passes to make it impossible for non-union workers to take work away from their members.

AUSTRIA

An agreement signed on April 12, 1984 between the Austrian Data Protection Commission and General Motors (Austria) protects individuals against disclosure of personnel information stored in computerized data bases. Conditions and regulations are specified under which GM can store and disseminate personal information on employees and customers in several data systems.

A range of information is collected about customers, such as car sales number, guarantees and warranty documents, the name of the customer, address, car type, registration number, seller details, payment terms, any sale or credit terms, and bank relation information. GM is permitted to use some of this information for market analysis. Otherwise, customer data is not to be disseminated outside the Austrian company.

Information concerning union membership, employee work records and wages is not to be disclosed. Details on wages can be released according to agreement by both GM and the trade union. Income details, the data protection commission stated, must show real income, that is gross salary, with deductions itemized. Wage payments also may be released for research purposes but vacation and sick leave details must be deleted from inclusion of any studies.

The agreement also specifies that control over computerized data must remain in Austria. The computer system cannot be changed or new programs implemented by GM headquarters in the Federal Republic of Germany without consultation with GM Austria and its union. Access to computer data by foreign parties must be strictly controlled; unauthorized attempts to acquire information are to be regarded as illegal. No divulgence of information to any foreign investigation or enquiry may be made without express agreement with GM Austria.

Systems intended to monitor idle machine time cannot directly or indirectly be used without consultation. Data concerning time worked cannot be released nor used in any way for evaluating personnel by regional or GM world headquarters.

Source: New Technologies: Their Impact on Employment and the Working Environment, ILO, Geneva, 1985, pages 214-215.

CONSTITUTIONAL RULING

In 1975 the Austrian Constitutional Court issued a ruling on telephone monitoring practices by a mid-sized steel works. The Court ruled this practice was "against human dignity" which is a general legal norm for "rights of personality". That is, individuals may not have their intimate private lives (sphere) intruded upon by the state. It is considered a landmark decision "in the defense of worker rights" by trade unions.

BELGIUM

There is no national legislation covering private sector use of electronic monitoring of workers in Belgium. However, labor-management contracts have been concluded containing provisions on personnel monitoring. One such agreement involves the SAIT Electronics Company in Brussels and its union. The agreement contains the following provisions:

(1) Confidential data on personnel may be processed automatically only if they are indespensable to the employer to meet legal obligations;

(2) Access to personnel data banks must be given exclusively to senior management of the enterprise and the data subject; and

(3) When an employee leaves the company, his data will be removed from the database and archived.

Government employees' personal details have been registered in a central data bank since January 1983. A decree giving a right of access and correction of these files has been issued. Although critics say the procedures involved are too complicated, such as those involving access and correction, the decree has not been amended. Some civil servants have complained that information about whether they can be easily relocated in the country has been collected. There is resistance by many Belgian civil servants about their "mobility for re-assignment."

SWITZERLAND

The Swiss Confederation of Trade Unions (SGB) issued a report in March 1984 on "new technology and data protection in the company." It contains a model technology agreement. One of the provisions states that the automated collection and evaluation of data on the work-place to monitor the conduct or performance of the worker is not allowed. Only a few companies, mostly those involved in heavy industry, have endorsed this agreement.

PART III

BRITISH AND COMMONWEALTH NATIONS: CANADA AND AUSTRALIA

CANADA

Background

Canada, with a population of 25 million, is a federal system, with 11 provinces and a national government headquartered in Ottowa. It has a labour force of 12.3 million, with 11 million employed at the end of 1984. This meant an unemployment rate of 11.3%, down from the 1982 high of 12.8% but still constituting a serious effect of the early 1980's recession.

About 35% of Canadian workers are represented by unions. Industry-wide collective bargaining is not common, and enterprise-level agreements are the general rule. Though some unions, such as the Canadian Union of Public Employees (CUPE) have drafted model Technology Agreements, this has not been effectuated to the degree that TA's have in Britain. Nor does Canada have national or provincial co-determination legislation creating works councils and co-determination in the European model.

There are no specific provisions dealing with work monitoring in any of Canada's national or provincial labour codes, nor have there been any regulations on monitoring issued by national or provincial regulatory authorities. Under the common law, no rights to privacy for employees have been found by courts to be legal limitations upon employers, nor have privacy statutes (Part IV of the Canadian Human Rights Act of 1977, the federal Privacy Act of 1982, or the Quebec data protection law of 1982) been held to control employer use of monitoring. What limitations on employer conduct have taken place have been the result of (a few) collective ~~bargaining~~ agreement clauses negotiated on that topic, or of arbitrator rulings interpreting rights of employees under contracts.

Union Positions

Prior to the arrival of microelectronics and office automation, Canadian unions had enunciated the traditional trade union position against measuring individual worker output and using this for judgmental purposes, as well as opposition to various forms of pre-computer surveillance -- hidden observation galleries in post offices, still or television cameras photographing workers, use of listening devices, telephone service-observing, etc.

Several examples of union activity on these issues, as compiled by Ken Rubin, a Canadian student of privacy and information technology, present the Canadian union viewpoint and efforts to deal with specific types of worker monitoring:[1]

1. Electronic Sorting Equipment

> The postal workers' opposition to individual-centred work measurement began in the 1950s when their postal association realized that their agreement to work measurement in 1953 did not simply imply the detection of faulty operations and methods. The fight was won by 1964 when the Post Office agreed to stop individual work measurement for full-time employees, though not for part-timers.
>
> The issue surfaced again in 1975, when counters were installed on electronic mail sorters to measure individual employee productivity. Following a six-week national strike the Post Office agreed that work measurement studies could be conducted only on groups of ten employees or more. Individual work measurement designed to pressure and speed up productivity continued, however, in violation of the collective agreement. Although the Post Office has continued to press for individual work measurement, the agreement now in effect until September, 1984 (Clause 41.01) prohibits the practice. However, postal workers know this will continue to be a difficult clause to keep and enforce.

2. Closed Circuit Television

Problems associated with camera surveillance are illustrated in the following two cases.

Puretex Knitting Company Versus the Canadian Textile and Chemical Union

In November, 1978, employees of the Puretex Knitting Company in Toronto went on strike for better wages, improved seniority and fringe benefits, and to obtain the removal of revolving monitoring cameras in the workplace. The cameras had been installed by the company without consulting the union, following the discovery of systematic theft by an employee.

The strike was settled after a few months, including the removal of one camera by the women's washroom, but the issue of the other cameras was referred to an arbitrator. The 1979 arbitration decision ordered the removal of the remaining cameras in the work production area but granted retention of the cameras in the storage, loading and parking-lot areas with the stipulation that they be used only for security purposes, not to monitor work.

Post Office Versus Canadian Union of Postal Workers - In 1978 the Post Office installed closed-circuit TV systems (CCTV) in two Toronto plants and hoped to install similar equipment in all its modern buildings across Canada to prevent mail theft. Older buildings had observation galleries used by management to survey the workplace. The union viewed the action as a management ploy to increase work supervision rather than a security concern. The union argued that if security was the concern, cameras should be installed at points of entry and exit. Furthermore, actions should be taken to prevent further illegal mail-opening abuses by the RCMP, carried out in cooperation with postal authorities.

The 1980 Marin Commission testimony revealed that management did not know what effect CCTV was having on postal losses, what effect it was having on employees, what percentage of mail losses and damage were due to theft, and where in the postal system theft was occurring. CCTV at one of the plants, Gateway terminal, was used 22 times between October 1978 and August 1980. Videotape reels were made of two suspected cases of theft: one suspicion proved to be unfounded, the other led to a prosecution.

Following a strike in 1981 on the issue, among others, of workers' surveillance, the employer agreed to limit CCTV to the two Toronto locations for the duration of the collective bargaining agreement valid until September 1984 (Clause 36.09). The same contract also contained clause 41.02 limiting the use of observation galleries in older buildings to ensuring mail security, and not for evaluating employees' performance.

3. Telephone Service-Observing

Electronic eavesdropping has been technically possible for some time. Nationally, however, it was only in 1974 that limits were placed on the practice with the passage of the Protection of Privacy Act. While this Act spelled out specific procedures and conditions for legal wiretapping by authorized police agents, it also added a new section to the Criminal Code, which legalized, without similar conditions, the employer practice of electronically eavesdropping on employees for work productivity observation. As the clause states:

> "A person engaged in providing a telephone, telegraph or other communications service to the public who intercepts a private communication (is able to do so) in the course of service observing or random monitoring necessary for the purpose of mechanical or service quality control checks."

Two cases illustrate the consequences of this section.

Airlines Passenger Agents - The Brotherhood of Railway and Airlines Clerks (BRAC), which represents CP Air passenger reservation agents, has been concerned with electronic monitoring of employees' conversations, particularly in the Vancouver reservation office.

A voice-activated taping system was unilaterally introduced by management to tape customer calls in order to monitor and coach reservation agents on their 'sales pitch'. BRAC representatives, however, charge that eavesdropping and taping include inter-office employee communications and personal conversations, as well as incoming customer calls, and that the tapes are being used to justify disciplinary actions. The union wants to put a stop to such practices and has threatened legal action.Management has responded with a promise that only probationary employees will be taped without their knowledge. Regular employees will only be taped with prior verbal notice,...

Telephone Operators on the Line - Telephone operators are subject to the same kinds of electronic surveillance. Eavesdropping on their workplace communications and the introduction of automated switchboards have led to stress and union opposition.

Remote listening and recording of long-distance telephone operators' conversations is used to check for politeness, tone of service and work procedures. Management claims it is a training procedure but, in practice, it is not limited to new employees. Operators must consent to the monitoring of their calls as a requisite for employment, and they are never sure when they are being recorded. Customers are of course unaware that their conversations are also being monitored and possibly recorded.

The Communications Workers of Canada (CWC), which represents several telephone companies' operators, called in its 1982 Convention for legal prohibitions against management measurement of individual production through electronic monitoring. CWC encourages operators who are informed of eavesdropping, after the fact, to automatically file a grievance.

CWC also objects to the recording of operator performance on the newly introduced automated switchboards. Besides resulting in job losses and further centralization, the automated switchboards are capable of recording the time spent on handling calls, and the time spent on the job and at breaks. Overruns are thus monitored and kept within computerized service-analysis records. The machinery, programed according to management directives, sets the pace and controls the workflow, thus ensuring that there are never surplus operators or 'unproductive' labour. Machine records can also be used to provide regulators with service statistics designed to justify telephone-rate increases.

In each of the areas in which Rubin described union positions and efforts, employers have defended these types of measurements or observations as socially and ethically justified, necessary to insure business efficiency and productivity, and not used in abusive ways. While we are not aware of any Canadian public opinion studies in which questions about these practices were included, it seems fair to conclude that, up to the present, issues of worker monitoring through closed circuit cameras, electronic sorting equipment, or telephone service-observing have not prompted general public concern, nor led to the enactment of legislative interventions.

Whether newer forms of electronic monitoring -- particularly of VDT work -- may be changing this situation is the issue we next examine.

VDTs and Work Monitoring

Beginning in the late 1970s, and influenced by European trade union activities relating to microelectronic impacts, a group of Canadian unions whose industries were beginning to experience office automation began conducting research and developing bargaining positions on new OA technology. In the private sector, lead unions included the Communication Workers (CWC), Brotherhood of Railroad and Airline Clerks (BRAC), Newspaper Guild, International Typographers (ITU), Graphic Arts, and Telecommunication Workers. In the public sector, leaders were the Canadian Union of Public Employees (CUPE) and Public Service Alliance. The national labor federation -- the Canadian Labour Congress -- also became active, especially through its federally-funded Labour Education and Studies Centre in Ottowa.

While the primary thrust of these union concerns was, first and foremost, protection of jobs and employment opportunities, and, secondarily, health and safety of VDT operators, Canadian unions were also concerned about quality of worklife issues. It was from both the safety and QWL perspectives that "electronic monitoring" came under consideration.

1. VDT Survey by CLC, 1980

In late 1980, the Canadian Labour Congress' Labour Education and Studies Centre conducted a detailed survey of 2,336 workers at 15 workplace sites across Canada. The sites of 12 different employers were surveyed, in both the public and private sectors, in "the transportation, communications, and public service industries." The survey focused on "the health and working conditions of Canadian office workers" as these were being affected by use of video display terminals. The survey report, Towards A More Humanized Technology, was published in 1982.[2] Sites represented by eight of the 11 sponsoring unions were used in the survey.

Several quotations from the Report's Summary cover the relationship of monitoring to the health problems studied:

> 3. Results of this study confirmed that health symptoms including eyestrain, stress and muscular discomfort are experienced by substantial numbers of Canadian VDT workers. These health problems were especially pronounced in workers making intensive use of VDTs for long hours in rigidly controlled and automated work environments. While ergonomic factors such as excessive glare, poorly maintained terminals, and inadequate chairs often contributed to high levels of reported health problems, psychosocial factors stemming from poor job design and dehumanizing working conditions were also strongly related to levels of reported complaints....

5. A clear picture emerged that VDT work was organized differently from traditional office work. Workers in intensive use applications (which comprise the "production line" and "data entry" job tasks) were generally required to spend the entire work day sitting at their terminals with little or no opportunity to move around or work at non-VDT tasks. The use of telephone headsets in "production line" tasks aggravated worker feelings of being chained to their work stations....

7. The degree of work monitoring by the system and the amount of control workers had over their work speed varied considerably amongst the various types of VDT work. One pattern emerged very clearly, however. The most intensive and most controlled use of both VDTs and workers was found in "production line" work with the "data entry" group following closely behind. The most variety and flexibility in job tasks was noted by the "professional and technical" group. The remaining group of "conversational clerical" VDT workers reported work patterns falling somewhere between these two poles.

Table 39 of the CLC study provided data directly related to health effects of VDT operators working under employer monitoring. (see table on next page) The CLC report commented on the table's results as follows:

> **Work Monitored by System**: Increased levels of the four stress-related health problems were found for VDT workers who reported their work was monitored by the computer system (Table 39). About twice as many such workers reported general tiredness, irritability, headaches, and sleeplessness "almost daily." These results indicate work monitoring to be another stressor in the VDT work environment.

The recommendations that the CLC made, based on the survey, included a coordinated set of proposals covering system design, ergonomics, work rules, worker participation, and further research. On the issue of employer use of monitoring, they recommended:

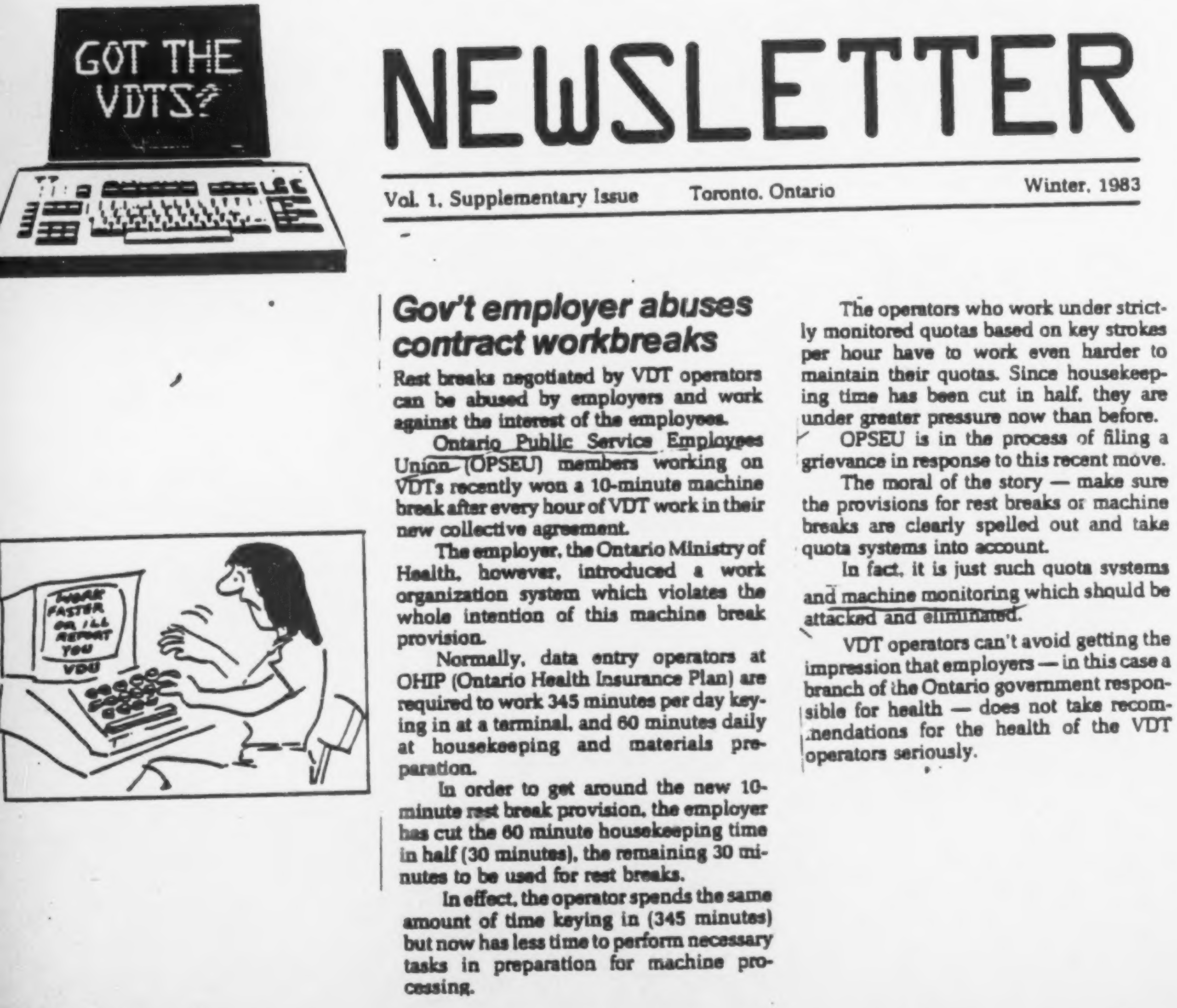
> Since stress symptoms increased greatly when workers were being electronically monitored:
>
> **It is recommended that direct electronic monitoring of individual worker's activities and productivity be discontinued.**
>
> If productivity monitoring is deemed necessary, other methods of indirect or aggregate monitoring exist for this purpose.

TABLE 39 - STRESS PROBLEMS EXPERIENCED "ALMOST DAILY" BY VDT WORKERS: EFFECTS OF WORK MONITORING AND DISTANCE FROM CO-WORKERS

			WORK MONITORED BY SYSTEM			DISTANCE FROM CO-WORKERS		
Total *VDT workers* = *1742)*			No	Yes	Don't Know	Too Crowded	About Right	Too Isolated
(Number in each group =)			*(745)*	*(807)*	*(140)*	(589)	*(1035)*	(55)
	(Number)	%	%	%	%	%	%	%
Stress Problem								
· general tiredness	*(465)*	27	23	31	28	31	24	40
· irritability	*(276)*	17	11	23	17	22	12	37
· headaches	*(249)*	15	10	19	18	14	14	35
· sleeplessness	*(180)*	11	8	14	9	12	10	22

2. Growth of A Union VDT Campaign

Mobilization of Canadian unions around control of "adverse VDT effects" grew stronger in 1981-84. In 1981, the Ad Hoc Committee on VDTs was formed under the Labour Council of Metropolitan Toronto and began publication of a widely read newsletter, called, "Got The VDTS?" A steady stream of articles in this publication reported health and stress problems experienced by Canadian VDT workers, with monitoring a frequent topic.


GOT THE VDTS?
WORK FASTER OR I'LL REPORT YOU
VDU

NEWSLETTER

Vol. 1. Supplementary Issue Toronto, Ontario Winter, 1983

Gov't employer abuses contract workbreaks

Rest breaks negotiated by VDT operators can be abused by employers and work against the interest of the employees.

Ontario Public Service Employees Union (OPSEU) members working on VDTs recently won a 10-minute machine break after every hour of VDT work in their new collective agreement.

The employer, the Ontario Ministry of Health, however, introduced a work organization system which violates the whole intention of this machine break provision.

Normally, data entry operators at OHIP (Ontario Health Insurance Plan) are required to work 345 minutes per day keying in at a terminal, and 60 minutes daily at housekeeping and materials preparation.

In order to get around the new 10-minute rest break provision, the employer has cut the 60 minute housekeeping time in half (30 minutes), the remaining 30 minutes to be used for rest breaks.

In effect, the operator spends the same amount of time keying in (345 minutes) but now has less time to perform necessary tasks in preparation for machine processing.

The operators who work under strictly monitored quotas based on key strokes per hour have to work even harder to maintain their quotas. Since housekeeping time has been cut in half, they are under greater pressure now than before.

OPSEU is in the process of filing a grievance in response to this recent move.

The moral of the story — make sure the provisions for rest breaks or machine breaks are clearly spelled out and take quota systems into account.

In fact, it is just such quota systems and machine monitoring which should be attacked and eliminated.

VDT operators can't avoid getting the impression that employers — in this case a branch of the Ontario government responsible for health — does not take recommendations for the health of the VDT operators seriously.

Alongside such publicity, Canadian unions began a campaign to secure technological change agreements covering VDTs. Two influential examples -- Tech Change: A Handbook for Negotiations[3] issued by the Canadian Labour Congress in 1982, and a Model Contract on Technological Change drafted in 1982 by the Canadian Union of Public Employees -- included proposed bans on work monitoring. Excerpts are reproduced below.

Canadian Union of Public Employees, Model Contract on Technological Change, 1982.

Article 30 - Technological and Other Changes

30.01 Technological Change - Definition

In this Article "technological change" means any change in:

a) the introduction of equipment, material or processes different in nature, type or quantity from that previously utilized;

b) in work methods, organization, operations or processes affecting one or more employees;

c) in the location at which the work, undertaking or business operates;

d) in the work, undertaking or business carried on by the Employer including any change in function performed and including the removal of any part of the work, undertaking or business.

30.02 Technological Change - Adverse Effects to be Eliminated

In carrying out technological changes, the Employer agrees to eliminate all injustices to or adverse effects on employees or any denial of their contractual or legal rights which might result from such changes.

• • •

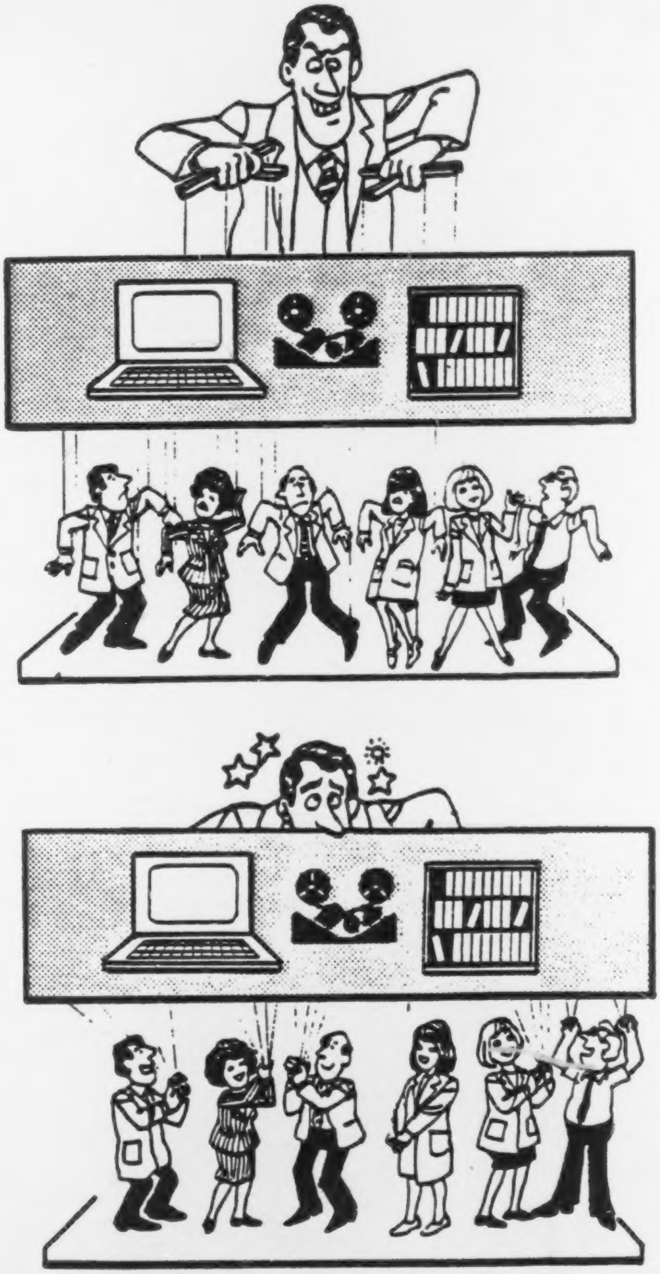
30.15 Technological Change - No Individual Work Measurement

It is recognized that volume measurement may be necessary to obtain an objective evaluation of the level of production of a group, a section or an office. However, there shall be no individual work measurement.

340

Tech Change:

A HANDBOOK FOR NEGOTIATIONS



Canadian Labour Congress (1982)

Surveillance and privacy

Employers are now using microelectronic technology to closely monitor the output of individual employees, the number and frequency of errors, and the time they spend away from their machines. The awareness of constantly being closely watched and paced by a machine greatly increases the stress levels for these workers.

Employees should be protected against such deep invasion of privacy and close surveillance. It is interesting to note that the practice of individual electronic monitoring was prohibited by legislation in Sweden in 1972. This was the result of the union representing Swedish telephone operators bringing the issue of the invasion of privacy to the Minister of Justice.

In Canada, the only successful attempt to prohibit individual work measurement has been the contract clause found in the collective agreement between **CUPW and Treasury Board** (expiry December 31, 1982):

> It is recognized that volume measurement is necessary to obtain an objective evaluation of the level of production of a group, a section or an office and there shall be no individual work measurement.

Another contract clause in the same collective agreement ensures that information obtained through surveillance can not be used for disciplinary purposes:

> The watch and observation systems cannot be used except for the purpose of protecting the mail and the property of the State against criminal acts such as theft, depredation and damage to property. At no time may systems be used as a means to evaluate the performance of employees and to gather evidence in support of disciplinary measures unless such disciplinary measures result from the commission of a criminal act.

Even with a guarantee of no individual work measurement, problems may still arise from management trying to raise productivity by using competition between different groups of employees. The definition of a group may also cause problems since it may be defined as two or more employees. The ideal solution is to negotiate a contract provision guaranteeing that no record of output can be used. Of course, this type of protective clause would not be applicable in workplaces which have bonuses based on individual productivity.

A few other collective bargaining contracts (beside the Treasury Board example above) have included clauses banning electronic monitoring of individuals. Examples are the 1982 contract between the British Columbia Open Learning Institute and the British Columbia Government Employees Union and the Ontario New Democratic Party Caucus Workers' Agreement.[*]

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[*] Cited in "Appendix G, VDT Provisions in Collective Agreements (Canada)," in Bob DeMatteo, Terminal Shock (Toronto, NC Press Limited, 1985), pp. 212-213.

3. Labour Canada Task Force on Micro-Electronics and Employment

In March of 1982,* the Federal Minister of Labour appointed a Task Force "to examine the implications of microelectronics for all aspects of harmonious and productive industrial relations in Canada." The Task Force heard testimony from a wide range of interested groups -- employers, manufacturers of microelectronic technology, union, scientists, civic groups, etc. This testimony covered the full range of VDT issues, with Canadian unions raising the issue of electronic monitoring in their presentations.

A good example of this appeared in the Brief submitted to the Task Force by the Brotherhood of Railway and Airline Clerks, Airline Division, presented by Staff Representative Christine Micklewright:[4]

ELECTRONIC SURVEILLANCE

> Again, the introduction by CP Air of a new telephone system, was not considered to be technological change. There was no Union consultation and now that it's in place we discover that it has intensive electronic monitoring abilities.
>
> I would like to take a few minutes to detail for the Task Force, some specific examples of the negative features of electronic monitoring in order to establish that our concerns are neither abstract nor imaginary but are, in fact, real events.
>
> Employees must sign in and out of the telephone system, not just at the beginning and end of a shift but also for all breaks taken. As well reservations agents also sign into their VDT. The computer retains a daily record of each person's activities.
>
> A complete record of an employee includes revenue production and a complexity of statistics relating to telephone calls handled. As well there is a sales programme and employees are exhorted to follow the format to the letter.

Deviation from the format has resulted in harassment and intimidation. One employee was the subject of so much pressure to produce according to format, that following numerous monitoring and tape recordings of phone calls, she finally passed out on the job and ended up hospitalised on a medical leave. Thanks to Union intervention, the mass of documentation was removed from her file but only after much resistance from the company.

Despite such blatant abuse of an employee, this type of harassment is continuing. Another employee recently confided to the Union that she had produced sufficient revenue in 1981 to place her in the top ten in the office - a total of a million dollars in sales - yet in the last six months she has become the subject of intensive monitoring and harassment. She is berated for failing to conform completely with the desired sales patter and has expressed fear that like her co-worker she will suffer a nervous breakdown. The employer has suggested to her that adherence to the sales patter could double her sales production. From being a proud and happy employee, her only objective now is to secure a transfer to another job within the bargaining unit. The cost of an unnecessary loss of such a valuable employee cannot be understated.

The employee told us that what the company really needed was robots, not human beings.

The issue of electronic surveillance will become a major item at the bargaining table. Just as the postal workers invoked their right to strike last summer over issues that included electronic surveillance so other Unions will be forced to take similar action against such dehumanisation of the workplace.

We strongly support the Convention resolution of the Communications Workers of Canada which calls for the prohibition of electronic monitoring to measure the productivity and performance of workers. Computers which have the ability to record for all eternity the smallest of clerical errors which become the subject of disciplinary action simply cannot be tolerated.

The Task Force issued its report in late 1982, under the title, In The Chips: Opportunities, People, Partnerships.[5] It urged a comprehensive program of action, covering policies on industrial relations, quality of working environment, health and safety, women's issues, training and education, and research. Among its recommendations was that "Close electronic monitoring of work be prohibited as inconsistent with human rights legislation throughout Canada." In its detailed discussion of this proposal, the Tast Force stated:

> (iii) Electronic Monitoring
>
> The most serious manifestation of the introduction of new electronic office equipment is its utilization to monitor the quantity of work performance. For example, we heard about the added stress on telephone operators -- primarily women -- who hardly ever have time to breathe, being caught in "endless loops" and being machine supervised to produce more. This type of electronic monitoring also attempts to place limits on workers' freedom to move around. They appear to be tied to their machines under the ever-watching and ever-recording devices.
>
> The Task Force regards close monitoring of work as an employment practice based on mistrust and lack of respect for basic human dignity. It is an infringement on the rights of the individual, an undesirable precedent that might be extended to other environments unless restrictions are put in place now. We strongly recommend that this practice be prohibited by law.

The recommendations of the Task Force were submitted to the Minister of Labor, but proved to be too sweeping, too costly, and too "pro labor" for the Minister of Labor to endorse. In fact, the Report was expressly disavowed by the Minister, and no action was taken on its proposals.

4. Bills in Provincial Legislatures

Between 1981 and 1981 and 1985, private member bills were introduced in the provincial legislatures of Ontario, British Columbia, and Saskatchewan to set ergonomic and work condition regulations for use of VDTs. The bill introduced by Richard Johnston, of the left-of-center New Democratic Party, contained the following provision:*

> "No employer of an operator shall use a terminal to to monitor the productivity of an operator on an individual basis."

None of these bills were enacted.

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* The 1983 Bill introduced by Mr. Johnston was Bill 83, "An Act For the Protection of Video Display Terminal Operators," Private Member's Bill, 3rd Session, 32nd Legislature, Ontario.

5. Continuing Union Advocacy and Public Discussion

During 1982-86, the issue of VDT work monitoring has been discussed at a series of national and local workshops, both those sponsored by union-affiliated groups and general conferences on work, privacy, technology, and industrial relations.

Typical of such meetings was a Workshop on Information Technologies and Personal Privacy in Canada, organized by the prestigious Science Council of Canada and held in Ottowa in October of 1984. Two presentations by union leaders at this Workshop provide both the current outlook of leading unions and information on the strategies they believe need to be followed to control electronic monitoring.

The president of the Communications Workers of Canada, Fred Pomeroy, reviewed developments since 1979 and then criticized current employer practices in work monitoring.[6]

> “In 1981 the Canadian Union of Postal Workers, Pomeroy pointed out, negotiated work measurement by group, prohibiting individual measurement. Canada Post had begun to introduce closed-circuit television equipment in 1974, installing systems in 26 major postal facilities as part of a billion-dollar program of technological improvement. The union also was successful in seeing that monitoring systems could only be used for the protection of mail and not for any disciplinary or work-performance evaluation of employees. In another agreement the Telecommunications Workers' Union was able to gain a commitment from the British Columbia Telephone Company that any data collected on computerized cash registers at Phone Marts could only be used for inventory purposes and not for individual work-measurement or -performance evaluation.

Employee Surveillance

The main purpose for collecting this quantity and type of information, Pomeroy asserted, is to speed up and gain greater control of the work process. Frecuently, a manager will sit down with a data-entry operator, a telephone operator or an airline-reservation clerk and say "you made 1,000 key strokes/answered 2,000 calls/ sold $30,000 worth of tickets last week - let's set a new objective for you to improve that by 10% in future." With this kind of sneed-up there is no end. As soon as the objective is reached, a new one is set. Pomeroy feels the quality of the work itself, and the health of the worker, suffer. Customers are not given the service they require, because the employee is not allowed to spend sufficient time on a call. The worker is more likely to make errors, and has been known to break down, under the increased pressure of surveillance.

Not only is this form of surveillance taking place for telephone operators, machinists, airline-reservation clerks and postal workers, it also has implications for those professionals working with computer-based systems. Lawyers, researchers and engineers can have similar data collected on them: the kind of searches they make, how long they spend on each, how many keystrokes they make, whether or not they made any errors, and so on, according to Pomeroy.

Another case, involving Air Canada,* resulted in upholding the right of the employer to monitor airline passenger service agents' conversations. It was ruled that the employee's right to privacy in this situation is not infringed by electronic eavesdropping equipment, providing the intent is for purposes of productivity and efficiency, not to cause emotional distress.[33]

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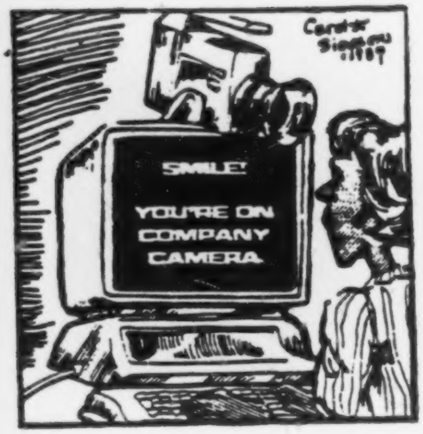
* Air Canada and C.A.L.E.A. (Simmons), unreported.

The second presentation was made by the staff expert from the Brotherhood of Railway and Airline Clerks. A story in the Toronto VDT Newsletter reported her presentation as follows:[7]



Management control

Electronic surveillance threatens workers' and customers' privacy

Editor's Note: The following article has been excerpted from a speech given by Christine Micklewright, Vice General Chairperson of the Brotherhood of Railway and Airline Clerks (BRAC), to a Science Council of Canada workshop on Information Technologies and Personal Privacy. The speech points out once again how work at a VDT can be misused, a violation of both worker and customer.

In the course of their duties supervisors listen silently to conversations of workers. Some conversations are taped and (replayed) during a performance appraisal ... These workers are caught in a dilemma. If they file a grievance or protest this invasion of their privacy in some other manner, they draw further attention to themselves, and the details of the nature of their actions become the subject of office gossip.

Fortunately, union action identified that the new telephone system, which was voice activated, was a violation of the Privacy Act and consequently management was forced to revamp a system, that recorded every word spoken. We will never know the extent of private conversation surveillance ... but we have eliminated that particular ability of the system to record private conversations between employees, and learned a lesson for other workers in the future.

Workplace surveillance: Management right?

Telephone workers and airline agents work in a highly controlled environment where workplace surveillance is an assumed right of management. The surveillance of each worker begins the moment he or she signs into the telephone system. An account of the worker's actions through the attachment of the umbilical telephone cord is recorded down to the second — the number of calls, duration, time between calls and time unplugged from the system.

It is fair to say that no manager would tolerate his business calls being secretly monitored by a superior, nor his bathroom breaks recorded. It is also fair to say that most management make personal phone calls during their working hours — a privilege that tends to be denied to their employees.

Surveillance leads to stress

The intensive and wide ranging nature of the surveillance now imposed on workers leads to tremendous stress on the job as workers are exhorted to increase productivity. There can be no doubt that such a working environment leads to health problems for some workers.

The use of computer terminals as a work tool also allows an employer to observe the transactions of an employee from some remote office. Such surveillance raises all kinds of fears about the privacy of electronic mail. The ability of one worker to communicate with another is frustrated by the lack of security.

Regrettably, the intense surveillance of workers by electronic means in an effort to quantify work fails to take into account the human aspect of work. There can be no real measurement of customer service; no real evaluation of whether a repeat customer was generated because of friendly helpful service; no real recognition that a worker's smile brought business, never mind how fast or slow the employee worked. Quality is being replaced by quantity.

Another presentation at the Science Council Workshop discussed strategies that opponents of electronic monitoring could follow. After reviewing bargaining and legal developments, Ken Mazur argued that amending existing federal laws represents the most effective approach. Amendments to the following statutes he believes to be the most effective strategy: Employment Standards Act, Labor Relations Act and Human Rights Code. Specifically, Mazur suggests:

—The Employment Standards Act could be amended to cover electronic surveillance, but, he notes, "the only difficult part would be that there are no affirmative orders to correct specific violations;"

—The Labor Relations Act might be amended to cover non-unionized businesses as well as unionized firms; and

—The Human Rights Code could be expanded to cover electronic surveillance if the right to privacy were extended to the workplace.

Labor's success, it is argued, will be conditioned on greater public awareness of electronic-monitoring issues.[8]

In 1985, theCo-Ordinator of Occupational Health and Safety for the Ontario Public Service Employees Union, Bob DeMatteo, brought out an expanded and updated version of a book he first authored in 1981, Terminal Shock: The Health Hazards of Video Display Terminals.[9] DeMatteo linked close electronic monitoring to the filing of worker compensation claims for stress, and strongly endorsed the monitoring ban included in the International Labor Movement Guidlines on VDTs adopted by representatives from 14 international labor federations in Geneva, Switzerland in 1984. These said:"No video based system should be used to

While we are not aware of any public opinion data on how the Canadian public feels about individual worker monitoring, our strong sense is that this has not been an issue of major public interest nor has it been high on the political agenda of Canadian public affairs. The protests by Canadian labor leaders and intellectuals parallels that in similar U.S. circles in 1984-86, and, in both countries, has not produced legal action from governmental authorities.

One possible avenue for government examination of VDT work monitoring -- and other forms of worker monitoring -- in the next few years may be the current review and updating of the Canadian privacy law under way in 1986. There are informal reports that experts working on modernizing the Privacy Act may have specific language authorizing the Privacy Commissioner to examine electronic monitoring in the workplace, by making this a ground for citizen complaints. Since it is not clear yet how this move will proceed, OTA will want to stay in contact with the office of the Privacy Commissioner to obtain definitive information.

REFERENCES

1. Ken Rubin, "Electronic Monitoring in the Workplace," *Perception*, March-April, 1983, pp. 25-27.

2. CLC Labour Education and Studies Centre, *Towards A More Humanized Technology: Exploring the Impact of Video Display Terminals on the Health and Working Conditions of Canadian Office Workers*, Ottowa, December, 1982.

3. CLC Technology Committee, *Tech Change: A Handbook for Negotiations*, 1982, Educational Services, Canadian Labour Congress, Ottowa.

4. *Major Issues for the 80's: Health, Technology, and Employment*, Brief Submitted to the Labour Canada Task Force on Micro-Electronics and Employment, by the Brotherhood of Railway and Airline Clerks (CRAC), Airline Division, by Christine Micklewright, July 5, 1982.

5. *In The Chips: Opportunities, People, Partnerships*, Report of the Labour Canada Task Force on Micro-Electronics and Employment, 1982.

6. Presentation by Fred Pomeroy, President, Communications and Electrical Workers, Science Council of Canada. "A Workshop on Information Technologies and Personal Privacy in Canada," Ottowa, October 1-2, 1984.

7. "Management Control: Electronic Surveillance Threatens Workers' and Customers' Privacy," *VDT Newsletter*, Labour Council of Metropolitan Toronto, Ontario, October, 1985.

8. Note 6 *supra*.

9. Bob De Matteo, *Terminal Shock* (Toronto: NC Press, Limited, 1985).

AUSTRALIA

The Law Reform Commission Australia (ALRC), established in 1973 by Act of Parliament, with reference to personal privacy was given the mandate to look into "the extent to which undue intrusions or interferences with privacy arise or are capable of arising under the laws of the Commonwealth or of the Territories, and the extent to which procedures adopted to give effect to those laws give rise to or permit such intrusions or interferences." The commission issued its report in June 1983. Among the main recommendations were the enactment of statutory privacy principles,[1] creation of a permanent statutory Privacy Commissioner, formation of a Human Rights Commission, and "new legislation to control the use of devices for secret intrusion into privacy by (a) listening devices; and (b) optical surveillance devices."

New Threats To Privacy

The commission concluded that privacy in Australia is in danger due to growing official powers, new business practices and new information technology. In addition to new legislation, it called for administrative remedies for interferences on privacy, specifically:

a) conciliation and negotiation should be conducted by the Privacy Commissioner involving disputes in the public sector;

b) publicizing the names of "those who flagrantly or persistently violate privacy principles;" and

c) undertake a public education program so people will be aware of their information privacy rights.

The commission specifically addressed optical surveillance in public and outside public places among its recommendations:

—Public places So far as public places are concerned, there should be no regulation of optical surveillance. For the purposes of legislation, a "public place" should be defined in the same terms as it is defined in police offences, summary offences and like legislation.

—Outside public places Outside public places the use of optical surveillance devices to observe people who could otherwise reasonably expect to be safe from observation should be prohibited. This prohibition should apply to all Commonwealth officers. It should also apply in relation to the Territories, by prohibiting optical surveillance by Territory residents, or of Territory residents. This prohibition should not be drawn in such a way as to protect wrongdoers who take steps to ensure that they are out of sight. Accordingly, where the surveillance device is used by a person for the purpose of observing what he had reasonable grounds to believe was the commission of an offence, the use of the device should be excused. Further, if the person using the device had reasonable grounds to believe that the use of the device was known to those whose activities were being recorded or observed, the use of the device should be excused. Finally, there should be the overriding requirement that the particular use of the surveillance device was, in all the circumstances, reasonable. This should apply even if those observed or recorded knew about the surveillance device. The onus of proving these matters should be cast on the person using the surveillance device.

Intrusive Employment Practices

With respect to intrusive employment practices, the ALRC cited weaknesses in basic protection in Australia. "The weakness of the common law rules protecting the liberty and privacy of the individual from invasion by private security guards and agents also renders largely nugatory its protection in institutional settings, particularly that of employment. An intrusive interference with the person is not tortious where consent has been obtained. Consent in certain settings, while it might appear to have been voluntary, will very often not be real. The weaker party, whether a shopper, employee, applicant for employment or institutionalized person, will often not be in a position to deny a request to search property or person. Consent may be an appropriate bar to an action for assault, but it is not necessarily a bar to the invasion of privacy, especially in relationships of unequal power. When the search is of the investigator's property, such as a search by an employer or institution of a locker or desk drawer, the law is of no assistance to the person whose privacy has been invaded."

After describing how optical surveillance systems are used, ALRC asserts that "such practices constitute an invasion of human rights, including privacy." It further observes that "there is at present no legal prohibition upon secret optical surveillance (in Australia)." In the employment contacts, ALRC refers to a statement by the Committee of Inquiry into Technological Change in Australia, which in a 1980 report[4] expressed concern at developing surveillance practices and recommended that "the parties directly involved in electronic systems that monitor individual employees should consult on appropriate standards to be observed."

Official Guidelines Issued

The Australian Public Services Board issued Guidelines on Official Conduct of Commonwealth Public Servants in August 1982.[5] The guidelines state: "Unless exceptional circumstances apply, covert surveillance devices should not be used in relation to departmental staff, on the grounds of both privacy and good staff relations. Open surveillance methods should be used only where the overall public interest in efficient and economical administration or preventing the misuse of Commonwealth property and facilities outweighs the privacy and other considerations involved. Staff members and staff associations should be briefed on the purpose and use of any such system before it is introduced."

The ALRC report was submitted to the government in 1983, and as of February 1986 the comprehensive privacy legislation it recommended has not been submitted to parliament. Periodic statements from the Commonwealth Attorney General's office indicate that in due course a bill will be put forward. At the state level, however, New South Wales (NSW) established the Privacy Committee Act, that came into force on May 2, 1975.

The NSW Committee has four major functions: (1) research——to develop a general policy toward privacy and advise on particular issues; (2) complaints——to mediate on complaints of unjustifiable invasions of privacy; (3) public education——to act as a clearinghouse for information privacy issues and to stimulate informed public data debate in this field; and (4) recommendation——of changes in the law and administrative and business practices. Although it has authority to mediate disputes, the committee has no power to enforce its recommendations. After nearly a decade of operating without enforcement power, the committee in 1984 urged the government to revise the act, giving it such authority.

In March 1980 the committee issued a background paper on the use of electronic monitoring of telephone calls. The research focused on "employing computers to keep a record of the details of telephone calls made from particular extensions, including the originating extension, the time of day, the duration of the call, the number of the call, and cost of the call." It pointed out five main purposes for operating such systems: (a) cost allocation between different parts of an organization; (b) control of staff personal calls; (c) system design and management; (d) correction of telephone misuse; and (e) checking on reasonableness of non-itemized charges. After the completion of the paper, the committee issued a set of guidelines to apply to this type of equipment, covering: collection of the minimum necessary data; care in supervision of business calls; recording only the duration of personal calls; security and destruction of the data generated; prior consultation with staff and warning that the system was connected.

Some aspects of the guidelines were objected to by the Labor Council of NSW as inadequate. The Council opposed all use of telephone-surveillance devices.

Typical Employee Monitoring Complaints

The NSW Committee's Annual Reports contain accounts of typical complaints. Among the examples provided from 1975 to 1984 are the following:

(a) Recording telephone conversations for training purposes, (1978) A company wished to measure how effectively its staff dealt with complaints from the public. People ringing in were asked whether they objected to the conversation being taped "for training purposes" and advised that if they did object no recording would be made. Most people did not object and the recording was then listened into by the supervisor and, if appropriate, discussed with the staff member. After discussion the recording was erased.

The Committee had no objection to this procedure particularly as the staff were advised of its existence.

(b) Control of abuse of Subscriber Trunk Dialing (STD) facilities (1978). Some large organizations have installed a device which can be attached to particular extensions and will record the time of the making of the call, the area code and the telephone number, suppressing the last two digits and the period of the call. Without the last two digits there is adequate information to request particulars of the call to ensure it was for business purposes without being able to check within the 100 possible numbers as to who the actual recipient was.

Provided staff are made aware of the existence of the system the Committee has no objection.

(c) Objections to an Intercom (1979). Is surveillance of employees unreasonable? This was the issue put to the Committee by a union representing employees engaged in collecting money from the public. The employees objected to their surveillance by an intercom system, especially as they were already monitored by television cameras. They felt that the intercom, which was operated without warning, made life on the job too intrusive.

The employer informed the Committee that the intercom was required to supplement the camera surveillance and make doubly sure that any money collected was not diverted en route to the till. The intercom also helped to enforce a rule that collectors must not converse with their fellow employees.

Whilst the Committee was sympathetic to the need to prevent misappropriation of funds, it also considered that employees were entitled to know when they were being monitored. The Committee recommended that a warning should be given whenever the intercom was in use so that employees would not feel that the employer was out to trap them. this would still enable the intercom to be used to supervise the collection of money.

The employer agreed to instal a flashing light to indicate when the system was in use.

(d) *Surveillance of Staff by Television Cameras* (1981)

In our background paper on employment, the Committee set out its concerns about surveillance of employees by various methods and particularly secret surveillance. In this instance, the employer quite openly introduced television cameras primarily to prevent or observe burglaries in a highly sensitive area. The Union involved, and the Committee, had reservations as to the value of the system, but in view of the fact that the Union had not objected, and of the highly sensitive area subjected to scrutiny, the Committee did not recommend removal at this stage.

The Committee did, however, stress to the industry its concern that unnecessary surveillance systems should not be installed. Individuals do not like to be subjected to surveillance by mechanical or electronic methods, particularly where they are not aware who might be observing them at any particular time. The Committee will closely observe installation of such systems and request employers to discuss proposals with the Committee in advance. The Committee would also be interested to hear from unions or employees about current or proposed systems.

The Committee notes with interest the continual monitoring of diamond sorting, proposed in Western Australia.

(e) *T.V. Studio's Own Candid Microphone* (1981)

A film studio connected a recording device to record all conversations between producers, sound, film crews and other employees involved in a production to isolate co-ordination problems and correct them. The union involved did not object to this but rightly objected to it being connected without the knowledge of or prior discussion with the staff. The company apologised for its lack of consideration. It was agreed that the recordings would be kept in a secure place and only used where there was a specific problem which required solution. They would not be used for spot checking of conversations between employees and would be erased after three months. A switch was also installed so that, at an appropriate time, employees could have a private discussion without its being recorded.

Trade Union Activities

Australian trade unions have paralleled the British unions in assailing the negative impacts of new office and factory automation on workers and the workplace. Bill Richardson, General Secretary of the Australian Council of Salaried and Professional Associations said that current automation practice had three main consequences: it destroys jobs, deskills and degrades the jobs that remain, and is designed to increase managerial control, through worker monitoring.*

In early 1986, the Australian Bank Employees Union wrote the Australian Attorney General asking for the national government to take action on "the ever increasing use by employers of data on their employees, and particularly on the automatic collection of data permitting the monitoring of individual work performance and workplace behaviour." The ABEU forwarded a copy of the November, 1985 FIET Guidelines on "Personnel Data Collection and Processing Systems," which call for such monitoring to be legally prohibited.**

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* Mike Cooley, "New Technologies: Some Trade Union Concerns and Possible Solutions," in Bjorn-Andersen, op. cit., p. 194.

** FIET Newsletter, No. 3, March, 1986, p. 7.

Complaints relating to employee surveillance were not sustained after 1982 becoming less technology related, as reported by the NSW committee. These were of two types: (1) intrusive questions on employment application forms, such as frequency of church attendance, how earnings are spent, political party affiliation, and disclosure of assets and liabilities; and (2) complaints about staff evaluations, access to medical examination results and requests for details on reasons given for dismissal from pervious jobs. Employee-management differences over collection, handling and access to personal information, however, remained an active source of complaints throughout the nine hear period.

Australia

Notes

1 Terms of Reference of the Law Reform Commission Australia, issued by R J Ellicott, QC, Attorney General in a letter to the commission dated April 9, 1976.

2 Privacy, Volumes I and II, Report No 22, Law Reform Commission Australia, Sydney, June 30, 1983.

3 Ibid, page LXI

4 Technological Change and its Consequences, Committee of Inquiry into Technological Change in Australia, Report Volume I, para 7.216 (1980).

5 "Guidelines on Official Conduct of Commonwealth Public Servants", August 1982, Personnel Management Manual, Volume 3, 47.

6 Telephone Usage Monitoring Systems, NSW Privacy Committee, Report No 53, March 1980.

PART IV

FAR EAST DEMOCRACIES:
JAPAN

JAPAN

Popular Attitudes Toward Privacy

As already noted, and contrary to assumptions among many Western observers, national public opinion surveys show that Japanese society and its leaders now hold concerns about invasion of privacy and register support for data protection measures at levels similar to those in Western OECD nations. In July of 1985, a representative national survey of 3,000 men and women aged 20 or over (a successor to a 1976 privacy survey) produced the following findings:[1]

- 1985 poll: 61% interested in protecting privacy and 25% not interested. In 1976, only 25% said they were interested in protecting privacy.
- 1985 poll: 48% believe cases of privacy violation are on the rise, and 34% do not. In 1976, only 31% believed violations were on the rise. While 71% in 1985 believe such privacy violations will increase in the future, only 57% thought so in 1976.
- 76% of respondents in 1985 believe there is an "urgent need" to take "appropriate measures to keep personal information under protection."

In the detailed sections of the survey, Japanese respondents complained about the flood of direct mail they were being subjected to; inaccurate information circulated about themselves and their families; and collection of personal information "by outsiders" without their knowledge. Information respondents felt it was important to secure privacy protection for included: "annual income, personal property or assets, and the amount of taxes they were paying"; family life; and political or religious creed. While 51% of respondents in the 1976 survey said they had no particular personal information they wanted to keep secret, this percentage dropped to 40% of respondents in 1985.

In the questions relating to computers and privacy, Japanese respondents shared the generally positive attitudes towards information technology voiced by respondents in most OECD nations. 85% of Japanese respondents in 1985 said the computer makes work and daily life easier, and 78% said computers were "indispensable" for modern life. However, 51% said there was danger of private life being violated by the spread of computers, and 69% believe that increasing computerization would increase violations of privacy.

No questions about privacy at work or of surveillance/monitoring of employees were asked in the 1976 or 1985 surveys, or on other national surveys about privacy conducted over the past decade.

Attitudes Toward Privacy Protection Measures

As of early 1986, there is no national privacy protection law in Japan, comparable to European data protection statutes or the U.S. Privacy Act of 1974. However, over 125 Japanese cities and towns have passed privacy ordinances on protection of municipal data (which are among the most sensitive in terms of containing citizen and family data).[2]

Since 1974, reports by the Administrative Management Agency (AMA) of the Prime Minister's Office have discussed privacy protection and stated that this could become an issue in Japanese life.[3] In 1983, the AMA issued a thoughtful report enunciating principles for national legislation;[4] this followed issuance of privacy-oriented findings by a 1982 Committee on the Protection of Privacy (chaired by Professor Kato of Tokyo University).[5]

During the 1970's and early 1980's, there were public discussions of privacy concerns over computerization of family registers; automation of the

"Green Card" for savings accounts; access by patients to their own medical records; creation of automated alien registration files; and creation of a citizen identification number. Again, no public discussion dealt with employee monitoring. Misuse of credit information was highlighted with a well-publicized story in May, 1983 of the leak from a credit data bank ("Japan Data Bank") of debt information about two television directors, and the subsequent harm done to their lives. This incident helped dramatize the dangers to persons when personal data are released improperly.[6]

How Japanese saw government protection of privacy interests was captured in a 1981 national public opinion study sponsored by the AMA.[7] It found that while Japanese citizens were very positive toward computers and their improvement of life, they were also concerned about collection of too much personal information and how it might be used, especially by government agencies. The poll found very strong support for "measures" to be taken to protect privacy in the public and private sectors. Support in the 84-94% range was expressed for requirements to obtain approval to collect personal information; to forbid uses other than the purposes for which collected; to give individuals a right of access and correction; to create an "inspection institution" for databanks; to compensate individuals for violations of personal privacy; and (by 76%) to provide criminal punishment for violators.

Worker Monitoring in Japan

Sources from both employers and unions agree that employers in Japan do not make it a practice to collect performance statistics on employees and use these for compensation, discipline, or termination purposes. Japanese unions replying to a FIET questionnaire on privacy at the workplace reported the situation as follows:[8]

> Some Japanese companies operate personnel information systems which include:
>
> (1) Payroll records.
> (2) Listing of qualifications held.
> (3) Inhouse service records.
> (4) Listing of applicants for relocation.
>
> The union's view is that data is used for reassignment of workers, and for education and training. In almost no case is it used to the disadvantage of workers e.g. by measuring work speed or error rates. The main exception to this is attendance records. Although these records are collected primarily to calculate overtime payments, it is clear that a consistently poor attendance record will affect an employee's efficiency rating. No action has so far been taken by unions to regulate these matters.

Interviews conducted in 1985 at one large Japanese affiliate of an American computer firm confirmed this judgment. A Japanese staff expert fully familiar with the practices of Japanese industrial and service companies remarked:[9]

> Individual work monitoring is not an issue in Japan. Employers do not measure individual output and make individual judgments on that basis. If they tried to do that, unions would complain, because it would violate the union-company attitude toward worker productivity. The climate in our workplaces is for employees to work hard, and for the whole work group -- employees and managers -- to strengthen the norm of hard work. We would not measure each person.

In fact, the only example of Japanese employers counting keystrokes of individual workers involves a very different purpose and use than the typical monitoring situation. In the early 1960's, key punch jobs in new data processing operations became very desirable work, especially among young women. EDP was seen as a critical industry of the future, and very important for the Japanese national interest. However, a wave of repetitive strain injuries (RSI) broke out among Japanese keypunchers, based on the high number of keystrokes being performed daily and working conditions at the key equipment.

Some companies (including IBM-Japan and UNIVAC-Japan) set voluntary guidelines to limit the number of daily keystrokes, and the Japanese labor federation covering this area of work (SOHYO) also proposed guidelines. In 1964, the Japanese Ministry of Labor (MOL) issued Guidelines (representing a compromise between the employer and union standards). These set a maximum of 12,000 keystrokes an hour for keypunchers. To enforce these guideline limits, employers could and did conduct test monitoring of individual-worker rates and totals.

The 1964 MOL Guideline also set keypunch working time at a maximum of 300 minutes a day; required 10-15 minutes an hour rest period for all workers in the same work room at the same time; set standards for noise, lighting, temprerature, and space in the work environment; and called for medical examination prior to assignment for key punching, with periodic checks thereafter (yearly).

The "voluntary MOL guidelines" of 1964 were widely followed in Japan. They are currently being used as a model for "consensus" building by industry, labor, and government for similar MOL guidelines to be issued in 1986 for VDT work.[10]

FOOTNOTES

1. "Invasion of Privacy by Computers Feared," The Japan Times Weekly, Saturday, November 16, 1985, p. 10.

2. Tsuyoski, Hiramatsu, "Japan's Privacy Protection Measures," Transnational Data Report, VII, No. 2 (1984).

3. "Japan Readies Privacy Protection Policy," Transnational Data Report, IV, No. 8 (1981).

4. Administrative Management Agency, Study Committee on the Protection of Privacy, Protection of Privacy in the Processing of Personal Data (Summary), July, 1982. Note also the 1982 Report by the People's Livelihood Council (an advisory group to the Prime Minister), which included a discussion of potential privacy threats in an information-oriented society. See Technological Change: The Tripartite Response, 1982-1985 (Geneva, ILO, 1985), pp. 33-35.

5. Note 2, supra.

6. Note 3, supra.

7. Ibid.

8. FIET Report of "Personnel Information Systems," Submitted to the Ad Hoc Meeting on the Follow-Up to OECD Privacy Protection Guidelines," Paris, 26-27 June, 1985.

9. Interview conducted in Tokyo by Alan F. Westin, May, 1985.

10. Information compiled by Alan F. Westin, from interviews with industry, legal, and academic experts, Tokyo, May, 1985.

PART V

INTERNATIONAL TRADE UNION ACTIVITIES

International Trade Union Activities

The international trade federations that have been demonstrating the greatest activity and are most directly concerned with issues of work monitoring are the International Federation of Commercial, Clerical, Professional and Technical Employees (FIET) and the International Confederation of Free Trade Unions (ICFTU). The two international unions have conducted surveys, prepared studies and held conferences on computerized personnel information and work monitoring. They have urged the International Labor Conference, the annual meeting of the International Labor Organization (ILO) to take up these subjects and consider adopting appropriate international labor standards to address them.

ICFTU Position

The ICFTU brought its concerns to the attention of the UN Commission on Human Rights Subcommission on Prevention of Discrimination and Protection of Minorities at its 38th session in 1985. As a result of circulating draft guidelines for the regulation of computerized personal data files, ICFTU found strong support for such action by the Commission. The following is an excerpt from a statement by Oscar de Vries Reilingh, Director of its Geneva office:

Our interest in the subject relates, of course, in particular to the use of computerized personnel data systems, i.e. data relating to employees collected by their employer, as distinct from personal data systems in general, which include the first type of data systems but go much wider to cover any data relating to individuals collected by any institution for any purpose. It is indeed very fortunate that the Special Rapporteur has clarified this distinction in his introductory statement and that the English title of the draft guidelines has been modified accordingly.

The importance of the protection of data privacy in respect of computerized personnel files is growing because of three factors, namely:

- the increasing use of cheap data processing hardware by small and medium sized enterprises, in addition to the large ones;
- new developments in data base software which makes it easier for users of such systems to change their requirements for information after the system has been set up rather than having to build all such requirements into it from the beginning;
- the growth in new automated methods of collecting data on the performance and behaviour of individual employees, such as telephone monitoring and the use of badges and identification cards to control movements.

General laws on the protection of personal data are very necessary to preserve individual liberties in the face of the increasing use of computer data bases. The regulation of personnel files through such legislation alone is, however, very difficult, because of the need to be specific enough to cover all aspects of data collection, processing and the use at the level of the individual enterprise or workplace. In a number of countries the legislation therefore provides for the right of worker representatives to be involved in the regulation of personnel files within the overall legal framework. In many instances this right is further elaborated in collective labour agreements between the employer and the trade union or unions concerned, regulating the establishment and operation of and changes in computerized personnel information systems and recognizing the principle that not only the individual should have the right of access to and correction of data in a file, but that the trade union or unions involved should have a collective right to monitor the use of computerized personnel files and to approve any modifications made to them.

A clear example of the importance of regulating certain aspects of the protection of data privacy in respect of personnel files through collective bargaining and the conclusion of collective labour agreements is the provision in the draft guidelines which prohibits the storage of information on trade union membership. Such a prohibition would run counter to the practice in several countries, both developed and developing, to have check-off arrangements at the enterprise level, i.e. arrangements through which the employer deducts trade union dues from the wages and transfers these dues to the trade union or unions concerned. In such cases it is absolutely crucial to store information on trade union membership in the data files. Quite naturally, we agree that employers should be prevented from collecting information in order to use it to discriminate against unionized employees. However, it is almost impossible to define in legislation when it is and when it is not necessary. This underlines the need to allow special regulations through collective labour agreements which would be best adapted to the requirements in each individual case.

The proposed draft guidelines are necessarily of a general nature. We therefore strongly support the suggestion in the report that the general principles could be supplemented by so-called "sectoral rules" for activities involving special risks and that the ILO should draw up appropriate guidelines concerning personnel files. As a matter of fact, this idea was again included in a resolution adopted by the ILO Advisory Committee on Salaried Employees and Professional Workers, adopted last April, and in a resolution presented by ICFTU delegates to the last ILO Conference in June this year which, unfortunately, could not be taken up due to lack of time.

As I have already stated, the ICFTU supports in general the revised draft guidelines as presented by the Special Rapporteur. In this connection, I have only two specific remarks to make:

- we hope that it is clear that, under the principles of fairness and of accuracy, the employee, who is responsible for the operation and maintenance of the personal data files, should be guaranteed the right of non-compliance when the employer orders the employee to carry out unlawful activities in connection with these data files;

- under the principle of interested-person access, we would prefer that the phrase "if the need arises" be deleted as it would unduly qualify the strength of this principle.

FIET ACTIVITIES

The International Federation of Commercial, Clerical, Professional and Technical Employees (FIET), composed of unions in 90 countries with a combined membership of 8.3 million, has demonstrated a keen interest in applying privacy restrictions to the collection and use of personnel data. In November 1985 FIET organized an International Trade Union Conference on Personnel Information Systems, attended by delegates from 27 FIET-affiliated unions in 12 countries. A background report described its position "that an effective response is required to meet the specific and growing problems presented to workers by the operation of personnel information systems."[1]

Intrusive Practices Identified

This response, FIET indicated, should go beyond the provisions of the OECD guidelines and Council of Europe convention. A particular concern identified is the "possibility that advanced computer technology may be used to collect additional (personal) information which does not traditionally enter personal files but which can now easily be correlated with such data." Four categories were identified:

a) automatic collection of information on attendance and work performance;

b) telephone monitoring;

c) security-system monitoring;

d) electronic payment systems used to trace employee buying habits.

On the latter point an example given related to a worker being reprimanded for absenteeism after a payment record showed he had purchased seven beers the previous lunchtime in the company canteen.

Risks of Monitoring Misuse High

With respect to automatically collected information, the report notes that word processors, numerically controlled machine tools, point-of-sale systems and other computer-driven devices permit the collection of large quantities of data personally identifying individual employees. On the one hand this is "justified by reference to the need to avoid misuse of systems and breaches in confidentiality." On the other, however, "it also makes possible the collection of information on such matters as: time work began; time work finished; length of rest pauses;

number of key depressions per minute; number of error corrections made, all of which can be recorded automatically against each employee's name. This permits much closer supervision and control of individual attendance and performance than is possible with manual systems. Some systems now in operation make it impossible for an operator to leave a machine without specifying for the machine's records the precise reason for the pause. This may well be in the interests of cost-effectiveness for the employer. It is certainly not in the interests of a humane work environment."

FIET recognizes that there are acceptable uses for such electronic monitoring, such as to make it possible for employers to know the reasons for periods of inactivity in a factory or office so that efforts can be made to eliminate bottlenecks in the supply of work elsewhere. Equally, information on work speeds and error rates in theory can be used to identify areas where employees have an excessive workload and where additional personnel are needed. Unfortunately, these are not the most common applications of this type of work-related data. More often it is used to classify employees as above——or below——average performers, to fix salaries, to influence promotion prospects, etc. It can also sometimes be used to determine salary levels directly (as in payment-by-results systems) or to justify disciplinary action taken against employees for bad attendance or unsatisfactory work performance.

Limitations on Monitoring Urged

FIET believes a number of conditions should be sought by trade unions, to ensure that monitoring is fairly conducted:

i) that no personal data should be collected automatically by machines without the knowledge and express approval of the works council/unions;

ii) that a complete specification of the programs to be used in connection with any computer-based equipment should be furnished to worker representatives, together with similar details of any subsequent amendments to such a program;

iii) that the purposes for which automatically collected data are to be used should be agreed in advance with the union/works council;

iv) that a timetable for the erasure of automatically collected data should be agreed.

Telephone monitoring

With regard to telephone systems, FIET points out that "computer-controlled telephone switchboards can be used to monitor the personal use of telephones by members of staff and to prevent unauthorized personal use." There can be a "significant degree of stress for employees," the report continues, "if they know that every telephone call is being monitored and that they may be called on to justify calls made. On occasions trade-union representatives have found employers using such systems to invoice their union for calls made on union business. Where such systems monitor not just external but also internal communications they can be used also to monitor normal social contacts between work colleagues and to detect any signs of worker discontent which results in abnormal patterns of telephone use. For all these reasons trade unions should insist on strict controls on telephone monitoring systems. Unless they are essential for invoicing purposes, systems which identify the destination of calls made by individual employees should be banned. Only aggregated data should be stored for any length of time."

Security systems

Security systems, by using access control and identification devices, allow management to know where employees are within a facility. FIET observes that such devices can not only be used to prevent authorized personnel from entering certain areas, but also trace the movements of all personnel. "The potential for such systems for disrupting trade-union organization within the enterprise has certainly not escaped many employers," the federation concludes.

Electronic payment systems

Magnetic and microprocessor-based cards used in company canteens and for other purposes can be a monitoring device, FIET claims. "Unscrupulous employers," the union argues, may use information collected about employee purchases against them, as was noted in the incident cited earlier.

FIET personnel data guidelines

Guidelines on Personnel Data Collection and Processing Systems, distributed by FIET at the conference, are "intended as an aid for trade unionists engaged in negotiating collective agreements on the introduction and operation of personnel data collection and processing systems." (Appendix A) The guidelines stress the full involvement of workers' representatives in planning and operation of information systems that collect data or can otherwise be used to monitor employees. Addressing automatic data collection, the guidelines state: "The automatic collection of data in a manner that would permit the monitoring and recording of individual employees' work performance or workplace behavior should be strictly forbidden. It is unacceptable that the application of EDP techniques in the workplace should be used to collect information, for example, on individual work patterns and error rates, or on normal social interaction in the workplace. If an employer can show a legitimate need to collect automatically data on output and productivity, workers' representatives should insist that such information be capable of being handled only on an aggregated basis so that it is impossible to break down and attribute data to the behavior or performance of individual employees. In this way employers should be prevented from using automatically collected data as the basis of decisions in respect of discipline or promotion."

Surveillance Conditioned on Agreed Practices

No telephone monitoring system should be put into operation "which is capable of recording the origin, destination or duration of individual calls by or to employees." Direct interception and recording of calls by management, FIET states, should be strictly forbidden.

Employers who prove a legitimate need to control the movement of employees may do so but where electronic devices are in operation "workers' representatives should ensure that their use is restricted to meeting well-defined and agreed security needs, and not exploited as a pretext for the establishment of a general system of surveillance of employee movements." However, "data no longer required to meet agreed needs should be immediately erased."

In a statement issued at the conclusion of the conference, the participants:

- —welcomed OECD, CoE and UN data-protection initiatives and "strongly emphasized the pressing need to extend protection of internationally recognized basic human rights at the workplace itself";
- —called on the ILO to "make a crucial contribution", through the elaboration and adoption of a convention on personnel data processing;
- —reiterated the view that "the automatic collection of data permitting the

monitoring of individuals' work performance and workplace behavior should be legally prohibited;" and

—stressed that "legislation alone was unlikely to offer sufficient protection to employees, and needed to be complemented by trade union or works council involvement in the control of personnel data collection and processing."

Notes

1 Personnel Information Systems, document prepared by FIET, Geneva, for Internatic Trade Union Conference on Personnel Information Systems, November 28-29, 1985, 30 pages.

2

FIET

GUIDELINES ON PERSONNEL DATA COLLECTION AND PROCESSING SYSTEMS

INTRODUCTION

These international trade union guidelines are intended as an aid for trade unionists engaged in negotiating collective agreements on the introduction and operation of personnel data collection and processing systems. They may be regarded as complementary to the FIET Model Technology Agreement published in 1983 which sets out in 40 clauses the general, procedural, and substantive issues with which trade union negotiators will have to deal in the field of technology. Most of these principles are fully applicable to the specific case of personnel data collection and processing, and are not repeated in these guidelines which may, therefore, be used most effectively in conjunction with the model agreement.

1. GENERAL

The basis for negotiations between an employer and workers' representatives should be a commitment that no innovation in respect of personnel data collection and processing should be implemented without agreement between both parties on all aspects of its introduction and operation. Until such agreement is reached no modification of existing arrangements should be made.

2. SYSTEMS SPECIFICATION

Workers' representatives should be fully involved, from the earliest planning stage, in innovations in all areas of electronic data processing. All relevant information should be made available by the employer, in intelligible form, on the specifications of the software packages, and the overall capabilities of the systems under consideration.

3. TYPE OF PERSONNEL INFORMATION TO BE COLLECTED, STORED AND PROCESSED

The categories of personnel information which the employer is permitted to collect should be set out in the collective agreement. On no account should the employer collect any type of information other than those listed.

4. PURPOSES FOR WHICH INFORMATION IS HELD

The precise purposes for which information is to be held and used should be specified in the agreement. Workers representatives should ensure that they are restricted to directly work-related issues and legally prescribed objectives.

5. MINIMUM DATA VOLUME

The volume of data stored should be kept strictly to the minimum required for the attainment of the agreed objectives. Provision should be made for the regular erasure of material which is surplus to that requirement. The time intervals agreed for erasure will depend on the nature of the data, but particular attention should be given to the case of employees' disciplinary records.

6. AUTOMATIC DATA COLLECTION

The automatic collection of data in a manner that would permit the monitoring and recording of individual employees' work performance or work place behaviour should be strictly forbidden. It is unacceptable that the application of EDP techniques in the workplace should be used to collect information, for example, on individual work patterns and error rates, or on normal social interaction in the workplace. If an employer can show a legitimate need to collect automatically data on output and productivity, workers' representatives should insist that such information should be capable of being handled only on an aggregated basis so that it is impossible to break down and attribute data to the behaviour or performance of individual employees. In this way employers should be prevented from using automatically collected data as the basis of decisions in respect of discipline or promotion.

7. COLLECTION OF INFORMATION

The general principle that information should be legally and fairly obtained should be strictly observed. Information should be obtained only in ways known to, and agreed by, employees.

8. THE ACCURACY OF INFORMATION

It should be established that the full burden of responsibility for the accuracy of data held should rest with the employer who, equally, should be liable in respect of any adverse consequences for an employee arising from inaccuracies. The employer should also be responsible for ensuring that data is up-dated with sufficient regularity.

9. EMPLOYEE ACCESS TO PERSONAL RECORDS

Every employee should, at any time, have the right of immediate access to all data held on him, or her, at no personal expense. Workers' representatives should also secure agreement that a full print out of each employee's data file should be made available to him or her routinely at regular intervals.

10. RIGHT TO CORRECT DATA

Any employee who finds, on inspection, that data held on him or her is inaccurate should have the right to have erroneous items corrected.

11. LIMITATION OF ACCESS TO DATA

The right of access to the personal files of any employee should be limited to a minimum number of individuals named in the agreement. They should be identified on the basis of the strict requirement of their job responsibilities.

12. SAFEGUARDS FOR DATA SECURITY

In negotiating the specifications of the personnel data collection and processing systems to be introduced workers' representatives should ensure that the system selected incorporates sufficient technical and organisational safeguards against access by any person other than those authorised in the agreement. In addition, any data run carried out in respect of an individual employee should be recorded with details of when it took place and on whose initiative. Information on such data runs should be made available to the individual concerned on request.

13. TELEPHONE MONITORING

Workers' representatives should insist that no telephone monitoring system should be put into operation which is capable of recording the origin, destination, or duration of individual calls by, or to, employees. Direct "listening in" on calls should be strictly forbidden.

14. AUTOMATIC MONITORING OF EMPLOYEE MOVEMENT

Employers may be able to prove a legitimate need to control the movement of employees, particularly for security reasons and when access to some areas is restricted. Such control is increasingly achieved by the use of personal identity cards or badges. Where such devices are in operation, workers' representatives should ensure that their use is restricted to meeting well defined and agreed security needs, and are not exploited as a pretext for the establisment of a general system of surveillance of employee movements. Provision should be made for the immediate erasure of data no longer required to meet agreed needs.

15. COMMUNICATION OF INFORMATION TO OUTSIDE PARTIES

The communication of personnel data to outside parties should be strictly prohibited. Any possible exceptions to this principle should be set out in the agreement and take place only with the consent of the employee concerned. The employer may also be legally required to disclose information to third parties.

16. PROVISION OF TRAINING FOR WORKERS' REPRESENTATIVES

Effective control of personnel data collection and processing systems in accordance with the terms of these guidelines requires that workers' representatives are in possession of sufficient technical knowledge to enable them to understand fully the working and capabilities of the system in question. Therefore, agreement should be reached that such representatives should attend appropriate EDP training courses at the expense of the employer. It is important that this training should be undertaken at a sufficiently early stage in the process of the introduction of any system to allow representatives to participate meaningfully in consideration of its specifications. Trade unions should also give attention to meeting education and training needs arising from personnel data questions.

17. RIGHT OF INSPECTION

The provisions of any agreement are liable to remain a dead letter unless they can be effectively enforced. Therefore a right of inspection of the operation of personnel data collection and processing systems should be included in the agreement. This should provide that designated workers' representatives or, on their request, members of an independent data inspectorate, should have the power at any time, and without previous notice, to examine the functioning of a system. They should be guaranteed free and unrestricted access to all aspects of the system and be able to report their findings to the relevant works council, trade union, or, where appropriate, data authority.

PART VI

INTERGOVERNMENTAL ORGANIZATIONS: UN, ILO, AND COUNCIL OF EUROPE

The intergovernmental organizations that h ve expressed an interest in employee privacy and/or worker monitoring ave done so because of their mandates in human rights or labor-manageme t relations and working conditions. The early and continuing leadershi om the field of personal data protection by the Council of Europe, stron ly supported by many member states, clearly influenced the UN Commiss n on Human Rights initiative in this field. The Council of Europe (CoE), regional body with 21 member countries, was established in 1948 to impl ment the European Convention on Human Rights. Beginning in the early 197 the CoE Committee on Legal Affairs took up how personal privacy may b affected by the introduction of computerization in member countries. T is led to two recommendations on how the public and private sectors shou d treat personal information and finally in 1981 approved a legally bin ing convention on the subject which came into force in October 1985.

The UN Commission on Human Rights has bee concerned about how science and technology have been affecting human righ since 1967, and first took up the question of whether special attention hould be given to the computerization of personal records in the mid-197 . The matter has been under consideration by the Subcommission on Pre ntion of Discrimination and Protection of Minorities since 1982. Lou Joinet, a French magistrate, former chairman of the Council of Europe mittee on Data Protection, was asked to prepare Draft Guidelines for he Regulation of Computerized Personal Data Files. This report was appr ved, with modifications, at the subcomission's 1985 session. It is being istributed to UN members and should be ready for final consideration w n the subcommission meets next year. If approved, the guidelines would submitted to the full Commission on Human Rights and then the UN Gene l Assembly.

The importance of employee information pr acy and worker monitoring being considered human rights issues subject to nternational guidelines and codes governing acceptable behavior and n ional legislation, is that they cast these issues in a moral and ethical ntext. Proponents of extensive employee rights vis-à-vis applications of nformation technology by management can exploit endorsements by human ri ts organizations to demonstrate the rightness of their case.

The International Labor ~~[illegible]~~ Office (ILO), a UN agency with some 144 member countries, has a 65-year record of "promoting international action aimed at achieving full employment, the raising of living standards and improvement in the conditions of labor." The means of collection and uses of employee information are within this official ILO purpose statement. However, employee privacy is only one of a host of issues that face this organization. The communist bloc and a number of Third-World countries show little interest in such issues. On the other hand, if and when an ILO policy statement is negotiated at the full International Labor Congress, this could boost the unions which have been in the vanguard of establishing controls over information technology in the workplace.

UN COMMISSION ON HUMAN RIGHTS

The UN General Assembly in December 1968 (Resolution 2450(XXIII)) asked the Secretariat and other agencies to study "uses of electronics which may affect the rights of the person and the limits which should be placed on such uses in a democratic society." The Commission on Human Rights, Subcommission on Prevention of Discrimination and Protection of Minorities, undertook a study into whether "guidelines in the field of computerized personal files"[1] should be adopted by the full Commission and possibly by the General Assembly itself. The study was prepared by Special Rapporteur Louis Joinet of France, who participated in drafting the French 1978 act on Data Processing and Liberties, and served for a term as chairman of the CoE Data Protection Committee.

Draft Guidelines for Personal Files

The study's conclusions were endorsed by the subcommission in 1983, and the provisional draft guidelines were adopted at its 1984 annual session. The UN Secretary General, however, was requested to transmit the guidelines to all member states and relevant international organizations for comment. Revised guidelines, taking into account suggested amendments, were approved by the subcommission in August 1985.[2] The guidelines contain many of the principles embodied in the CoE convention, with the addition of a principle of non-discrimination. No enforcement mechanism was proposed to supervise their eventual implementation.

Among the suggestions received by the subcommission was that the "possibility should be left open for supplementing its general principles by 'sectoral' rules." One sector "involving special risks" was identified as personnel files. The International Confederation of Free Trade Unions (ICFTU) in a statement on the guidelines stressed the importance of protection of data privacy with regard to computerized personnel files, because of, among other reasons, "the growth in new automated methods of collecting data on the performance and behavior of individual employees, such as telephone monitoring and the use of badges and identification cards to control movements of employees."

Final Approval in 1986

The period for comments and suggestions from governments and international bodies has been extended into 1986 when the Special Rapporteur is to integrate them into a final report. The subcommission is expected to complete consideration of the guidelines at its 39th session scheduled for August 1986.

UNCHR

Notes

1 Draft Guidelines for the Regulation of Computerized Personal Data Files, UN Commission on Human Rights, Subcommission on Prevention of Discrimination and Protection of Minorities (E/CN.4/Sub.2/1985/21), June 23, 1985.

2 Report of the Subcommission on Prevention of Discrimination and Protection of Minorities on its 38th session (E/CN.4/1985/5), Geneva, August 5-30, 1985, page 55.

INTERNATIONAL LABOR OFFICE (ILO)

At the urging of the International Federation of Commercial, Clerical, Professional and Technical Employees (FIET), the International Labor Office's Committee on Salaried Employees and Professional Workers meeting in Geneva during April 1985 adopted a resolution on "Personnel Information Systems and Data Privacy in Commerce and Offices".[1] The resolution invites the "Governing Body of the ILO to request the Director General to carry out studies with a view to establishing, in consultation with other appropriate United Nations agencies, a compendium of principles and good practices for safeguarding the rights of individual workers at the enterprise level."

Compendium of Principles Asked

A resolution along similar lines was introduced at the 1985 ILO Conference in May 1985 but not debated or adopted due to time limitations. Its operative provisions, in addition to (1) calling for studies on problems concerning the collection, storage and use by employers of individually identifiable data relating to their employees, also calls on ILO to (2) organize a tripartite meeting of experts to prepare rules and guidelines governing the regulation of data privacy at the workplace; and (3) include the question concerning regulation of computerized personnel information systems and data privacy in the agenda of a forthcoming session of the annual ILO Conference.[2]

Possible New Standards

Within the current review of the Working Party on International Labor Standards of the classification of existing Conventions and Recommendations the ILO's Governing Body, at its 232nd session (March 1986), included in its draft revised classifications of standards two items under the Industrial Relations topic as possible subjects for new international instruments: (i) Standards on the protection of workers in matters of discipline; and (ii) data protection of workers. The item was included on the suggestion of the Worker members of the Working Party. The Employer members considered that this subject might be regarded as an aspect of conditions of employment. The draft will be discussed at the November 1986 session of the Governing Body.

Technology Threats Raised

The ILO Secretariat supports such projects, if the organization's press office and official publications are any guide. ILO Information (October 1985), the monthly bulletin of the organization, carries headlines "electronic spies threaten workers' privacy," explaining that "there's basically nothing wrong with those technological wonders which boost productivity, tighten security or help end boring work. The trouble starts when they are used to spy on workers, invade their privacy and divulge personal data to anybody who presses the right key." These statements are offered by way of introducing the ILO publication Technological Change: The Tripartite Response 1982-1985.[3] It is a compilation of studies and country reports on the impacts of computerization——illustrating the technological dilemma facing the world due to computerization.

Notes

1 Text of resolution concerning follow-up to 1978 Compendium of Principles and Good Practices relating to the Conditions of Work and Employment of Professional Workers.

Resolution on personnel information systems and data privacy in commerce and offices

The Advisory Committee on Salaried Employees and Professional Workers of the International Labour Organisation,

Having met in Geneva, in its Ninth Session, from 17 to 25 April 1985,

Observing the growth in the use by employers of computerised systems for personnel management in certain countries,

Observing also the increasing use of new technologies in commerce and offices for this purpose,

Aware of the dangers which the misuse of such systems could create,

Noting the work already carried out in other international organisations in the field of data privacy, notably the Convention of the Council of Europe for the Protection of Individuals with regard to Automatic Processing of Personal Data, the OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data, and similar guidelines on computerised personnel files currently under discussion by the Subcommission on Prevention of Discrimination and Protection of Minorities of the United Nations Commission on Human Rights,

Considering the importance of protecting the rights of workers in the workplace,

Considering the usefulness of ILO studies on the use and disclosure of personnel data,

Adopts, this twenty-fifth day of April 1985, the following resolution:

The Advisory Committee on Salaried Employees and Professional Workers invites the Governing Body of the International Labour Office: to request the Director-General to carry out studies with a view to establishing, in consultation with other appropriate United Nations agencies, a compendium of principles and good practices for safeguarding the rights of individual workers at the enterprise level.

2 Resolution concerning computerized personnel information systems and data privacy, International Labor Conference, 71st session, Geneva, May 25, 1985.

3 Technological Change: The Tripartite Response 1982-1985, International Labor Office, Geneva, 1985, 355 pages.

International Labour Conference
Provisional Record
Seventy-first Session, Geneva, 1985
1

Resolutions

Resolutions Submitted in Accordance with Article 17 of the Standing Orders of the Conference

May 25, 1985

Resolution concerning Computerised Personnel Information Systems and Data Privacy, Submitted by Mr. Ahmed, Workers' Delegate, Pakistan; Mr. Benya, Workers' Delegate, Austria; Mrs. Carr, Workers' Delegate, Canada; Mr. Dolan, Workers' Delegate, Australia; Mr. Karlsson, Workers' Delegate, Sweden; Mr. Mehta, Workers' Delegate, India; Mr. Muhr, Workers' Delegate, Federal Republic of Germany; Mr. Sánchez Madariaga, Workers' Delegate, Mexico; and Mr. Svenningsen, Workers' Delegate, Denmark

The General Conference of the International Labour Organisation,

Noting the rapid world-wide growth in the use by employers of computerised systems to store information relating to individual employees,

Noting also the increasing use of new technologies to collect data on individual performance and behaviour,

Considering the dangers to which freedom of association, freedom of expression, freedom of movement and privacy of the individual worker can be exposed by the misuse of computerised personnel information systems,

Stressing that any data on workers held by an employer should be accurate, should be collected by fair means and should be restricted entirely to those necessary for the worker/employer relationship,

Stressing also that the existence of such data should be known to the individual worker and to the worker representatives, and that such data should be freely available to the worker concerned for verification, should be protected against unauthorised access within the enterprise and should not be transferred to private organisations or public authorities without the permission of the worker concerned,

Noting the work already carried out in other international organisations in the field of data privacy, notably the Convention of the Council of Europe for the Protection of Individuals with regard to Automatic Processing of Personal Data, the Organisation for Economic Co-operation and Development's Guidelines on the Protection of Privacy and Transborder Flows of Personal Data, and similar guide-lines currently under discussion by the Sub-commission on Prevention of Discrimination and Protection of Minorities of the United Nations Commission on Human Rights,

Considering that the protection of the rights of employees in the workplace against the misuse of personnel data collected by employers raises specific problems of importance to the International Labour Organisation,

Considering also that regulations governing the collection, use and disclosure of personnel data should be established both by law and by collective agreement;

Invites the Governing Body of the International Labour Office—

(a) to request the Director-General to carry out studies on the problems concerning the regulation of the collection, storage and use by employers of individually identifiable data relating to their employees;

(b) to organise as soon as possible a tripartite meeting of experts to prepare rules and guidelines governing the regulation of data privacy at the workplace;

(c) to include the question concerning the regulation of computerised personnel information systems and data privacy in the agenda of a forthcoming session of the International Labour Conference with a view to the adoption of appropriate international labour standards.

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LO INFORMATION

International Labour Office is the permanent secretariat of the 150-member International Labour Organisation, a specialised agency associated with the ited Nations.

This bulletin is published five times a year. Volume 21, No. 4, October 1985

Electronic spies threaten workers' privacy

There's basically nothing wrong with those technological wonders which boost productivity, tighten security or help end boring work. The trouble starts when they are used to spy on workers, invade their privacy and divulge personal data to anybody who presses the right key.

Thus some enterprises have introduced card-readers in place of door handles. To leave or enter their workplace employees must insert ID badges into an electronic slot. The stated purpose is protection of the company's sensitive processes or secrets.

"You have a feeling that Big Brother is watching you," a union official complained. "The computer even knows when you go to the toilet."

A similar spectre looms in offices where word processors can, besides speeding up efficiency and improving working conditions, produce daily statistics showing the number of operations performed, the time worked, the number of errors committed and even graphs indicating operator capability on which to set performance standards.

Electronic spying on workers is bad, but it can be identified and remedies exist on the collective bargaining shelf. Invasion of workers' privacy is a more serious and more complex matter. It is difficult to prove and effective antidotes are in a laboratory stage.

Today details of a whole life can be squeezed on a few centimeters of tape. Hence the temptation and the risk to record personal information that is wholly irrelevant to employer-employee relationship. Some data may be subjective based on dubious sources or secretly recorded by an unauthorised person. However, once they find their way into computer memory they are later treated as objective facts.

The realisation of the danger is growing. A recent international opinion poll showed that 75 per cent of people interviewed in the United Kingdom feared computerised information could invade personal privacy. In France the figure was 71 per cent, in Norway 56 per cent, in the Federal Republic of Germany 51 per cent, in Japan 50 per cent, and in

approaches vary, legal provisions usually cover such aspects as the purpose of personal data collection, access to computerised information and restrictions on its disclosure, the right of individuals to verify their files and request changes, as well as penal sanctions for unauthorised divulgations or misuse of computerised personal information.

In Sweden anyone wishing to set up or operate a computerised filing system containing personal data must first obtain a permit from a governmental authority which specifies the purpose of data collection and decides whether or not those who are registered in the file must be informed of its existence. Any individual has the right to obtain a printout of his file and ask for rectifications if necessary.

In Italy access to personal data banks needs express authorisation of the judiciary. All civil servants who illegally use or divulge such information are liable to imprisonment.

A British Data Privacy Act imposes obligation on employers to protect workers against misuse of data held in computers. It also gives "data subjects" the right to apply to the courts for compensation in the case of incorrect use of personal computerised information.

Another common feature of the existing legislation in this field are restrictions imposed on access to and collection of data on race, religion, politics, affiliation to trade unions, co-operatives, cultural associations or any other legally recognised organisation.

Questions of workers' privacy are increasingly discussed at the bargaining table. A pacesetting collective agreement was signed in 1984 at a General Motors subsidiary in Austria stipulating the conditions under which the firm can deal with personal information on workers. It contains severe restrictions on disseminating employee data, some of which cannot be released without prior agreement of the trade union, the ILO survey reports.

At the 1985 International Labour Conference several trade union leaders expressed the view that national measures against possible misuse of computerised personal data needed to be bolstered by international action on a tripartite basis.

Earlier this year the ILO Advisory Committee on Salaried Employees and Professional Workers passed a resolution inviting the ILO to carry out studies with a view to establishing a compendium of principles and practices for safeguarding people's privacy at the workplace.

The ILO Governing Body at its next meeting in November will decide on the effect to be given to this proposal.

COUNCIL OF EUROPE

The Council of Europe, established in 1948 to draft and implement the European Convention on Human Rights, took its first initiative with regard to "privacy and the use of computers" in 1971. An expert group mandated to investigate "automated processing of personal data" suggested that new legislation was necessary in European countries and that the Council of Europe "would serve a useful function by helping member states avoid unnecessary divergence between their laws on the subject." In 1972 a conference of European ministers of justice adopted a resolution calling for the CoE to "consider the possibility of elaborating a draft international convention (treaty) on the protection of privacy in view of the increasing compilation of personal data into computers."

Personal Data Convention Ratified

A decade later, , the ministers of the 22 member governments opened a convention for the protection of personal data for signature. The agreement required ratification by five countries in order to come into force. On October 5, 1985 the convention became effective with Sweden, France, Spain, Norway and Luxembourg having ratified it. The convention embodies a number of fundamental principles of data protection, almost identical to those set forth in the OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data.

The Committee of Experts on Data Protection which prepared the convention, rather than disband when the convention had been approved, was instructed to consider more specific practices for various sectors or types of users of personal data. From 1980 to 1984 the committee completed recommendations on social science and research data, medical information, direct mail and marketing data and social-security records. These recommendations are non-binding but usually seriously considered by governments when drafting or amending national data-protection legislation.

Employment Sector Records Examined

The Committee's present activities involve personal data in police and law enforcement, employment and the "new technologies". The working party on the "use of personal data in the employment sector" distributed a questionnaire to member governments in 1985 "to learn of the texts of laws on regulations concerning the collection and use of personal information within the framework of employer/employee relations, in both the public and private sectors, as well as any important judicial decisions in this field." The questionnaire asks what personal details are normally collected, if limits are placed on collection of sensitive dat (such as data concerning political opinion, religious conviction, intimate life, race). for what purposes the information may be used, if it is disclosed to third parties, and whether employees have access to their records. One item addresses "surveillance of employees," asking for details about "methods of monitoring, if there is (employee) consultation before the introduction of such methods, and what forms of monitoring should be prohibited."

The Working Party is expected to examine questionnaire results in March 1986 and then decide whether to simply prepare a report describing employee-record practices in Europe or draft a recommendation that may become the standard or model for collecting and handling of such data.

It is recommended that OTA establish contacts with the Working Party to obtain the results of the questionnaires, which would contain useful materials from member countries.

PART VII

OBSERVATIONS

OBSERVATIONS

Surveying the national reports and the international union and intergovernmental activities, several main observations seem warranted:

1. No industrial democracy has adopted a conscious and comprehensive approach to employee privacy and worker monitoring through all of its various technological forms. Rather, issues are taken up on a topic-by-topic and situation-by-situation basis, and generally with a pragmatic, accomodation-of-conflicting-social-inerests approach, within the social norms of that society and the specific legal and industrial-relations mechanisms it has in place. No nation has under consideration a comprehensive approach to worker monitoring issues either, at this time.

2. The West German concept of "information self-determination" (from the Census constitutional decision of 1983), when linked with the "protection of the personality" and the "legitimate interest" or "purpose" principle for evaluating employer concerns, seems to offer the most explicit and up-to-date approach to balancing new-technology uses with evolving employee-privacy values.

3. The issue of worker monitoring is clearly being articulated and driven in public discussion by the trade unions. They have articulated a variety of bases for seeking bans or limitations on worker monitoring. These correspond to the five bases of social challenge to employer use of monitoring discussed in Part I of this report:

a. Non-surveillance ("privacy")
b. Health protection (stress impacts)
c. Group solidarity (work group and union value)
d. Struggle over employer "power" and "control"
e. "Dignity" claim

4. Given the shrinkage of union membership in most industrial democracies during the past decade, the loss of prestige that unions have faced with the general public (and younger workers) in this same period, and the heavy pressures both leaders and the publics of industrial democracies feel to increase productivity and wuality-competitiveness in production, the influence of unions to win either collective bargaining or legislative bans on work-productivity monitoring seem quite limited in the near future. However, the fairness, openness, and "decency" with which employers conduct electronic work monitoring seems to be an issue that will grow, since it has the dignity, privacy, and health aspects that are strong values in most industrial democracies. Therefore, how employers use monitoring rather than whether they should be allowed to do this at all, may be the central issue that reaches beyond union advocacy.

5. As the uses of location-control, telephone-call-surveillance, and personnel-information-systems expand in the next decade, these will most likely generate public discussion and probably some legal/regulatory action. It is here that the data protection laws and commissioner activities of other industrial democracies are likely to prompt specific policies. A major issue will be what employers are actually doing with these technologies. There is little empirical data on that issue, partly because these technologies are still quite new (or not used widely as yet).

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OTA FORM 4, REVISED, JUNE 1978

What Does Foreign Experience Suggest for the U.S.?

Concentrating on electronic work monitoring -- the centerpiece of the OTA inquiry -- what does the experience in other industrial democracies have to suggest about U.S. policy choices?

1. Much of the struggle between unions and managements over individual work measurement and personnel decisions is a direct function of the bi-party, bi-polar, zero-sum-game nature of organized labor relations. This model of workplace administration -- often called the "industrial democracy" model -- is built upon assumptions of conflicting interest and of an inevitable tension between management's drive for increased control of work processes and workers and the union's protection of workers against unfair exploitation. In this context, the work-monitoring issue we have called the "struggle over employer power and control" is the driving force of the challenge to "Big Brother monitoring." Especially in the European and British-Commonwealth nations, the key issue is the traditional, socially-institutionalized political struggle over workplace authority applied now to the new setting of office systems technology.

2. This model is not close in either political or institutional elements to the great majority of U.S. offices in which VDTs are being installed. About 90-95% of private-employer offices are not unionized. Perhaps 25-35% of local, state, and federal offices are union-represented. This means that the basic relationship of employee to employer in the great majority of U.S. offices is one in which there is no organized entity representing employees -- no professional staffs to counter management-staff expertise; no continuing source of data collection independent of management about workplace conditions and effects; no union educational and mobilization process directed

at employees; no demand for advance notice to unions of technological change; and clearly no institutionalized bargaining over the terms and conditions of work. And, union organizing efforts to create such bi-polar, organized relationships in American offices have not had significant success during the first decade of office automation. If anything, dominant social trends suggest that the overhwleming majority of U.S. office workers do not feel a need for unions to represent their interests in working conditions -- including issues such as work monitoring. This is tacitly recognized by the new thrust of the AFL-CIO's outreach to non-union workers -- offering credit card options, insurance programs, legal services, and other non-representational benefits for joining unions.

3. Therefore, to the extent that the conflict over work monitoring in many other industrial dmocracies arises directly out of the bi-polar conflict model of labor relations, it has relevance only in the small minority of U.S. offices where workers are union-represented. Even here, our field work at 10 such union-represented organizations, both public and private, suggests that it is the health effects dimension -- the harmful stress created in some types of intensive VDT work by the combination of close monitoring, oppressive work quotas, and job insecurity -- that most concerns American workers. Management's measurement of work *per se*, even with new electronic techniques and continuously, is not seen by American workers as either an illegitimate method or a necessary threat to individual dignity, as is often the cultural norm of workers in European social democracies. In the U.S., we found the cultural norm to accept employer work measurement on an individual basis, as long as it is fair, takes into account qualitative as well as quantitative aspects of the job, helps produce objective comparisons among workers for allocation

of special rewards (premium pay, promotion, etc.), and is conducted in an open, "due process oriented" process.

4. It is also important to observe the effects that office systems technology is having on the nature of office jobs, and how this may affect the "union model" of no-individual-measurement. The large mass of clerical workers doing data entry and customer service work is steadily being divided into two sectors of VDT operations: one sector with highly-repetitive and low-skill keyboarding, low-level customer-relations and low-discretion claims processing and a second sector of higher-level customer-service and claims-analysis work. The former types of jobs are the closest to the "office factory" milieu -- production work, measured output, low pay, quota-based supervision, etc. -- and the jobs where union appeals against oppressive, high-stress monitoring would seem to have the greatest potential.

However, it is precisely those jobs that are most likely to be significantly reduced by advancing computer and communication technologies, and by employer business trends. Optical scanning and direct customer-input from their premises are already reducing the data entry sector; along with the shifting of such work from urban locations to exurban U.S. sites or to off-shore production, there may be a steadily diminishing set of jobs for U.S. unions to address on the "close monitoring" issue.

This leaves the second sector -- customer-service and higher-level claims analysis jobs. If U.S. employers were to apply a heavy-handed Taylorist approach in collecting and using individual measurements in these jobs, this could become a potential sector for unions to raise the banner of "anti-Big-Brother-monitoring." While some private and public employers may adopt such practices, the importance of quality elements in satisfying customers or citizens in VDT-based jobs provides a strong element of business or government-service self-interest that works against the Taylorite tendency in most employment settings.

5. Recent experiments in employee involvement and quality-circle participation are sometimes cited as the "U.S. answer" to those urging that the European/British model of trade unionism or government-intervention is needed to avoid "oppressive work monitoring." While the use of employee participative mechanisms has not been as common in U.S. offices as it has been in factory settings, such mechanisms have been growing in the past 5-10 years in office work. Almost 40% of the 110 organizations we examined in late 1985 and early 1986 were using employee participation in various aspects of their VDT operations, from involvement in equipment selection to job-design or work-organization matters. However, American labor laws limiting employer associations, the absence of any non-union institutional forms for such efforts, and a lack of enthusiasm by managements for meaningful employee participation in many white-collar sectors are factors that have, thus far, kept employee participation from being the dominant model in office work. This is especially true at the clerical and administrative levels where work monitoring is most often practiced. This suggests that making work monitoring acceptable to most VDT clerical and administrative employees through participative mechanisms is not yet the prevailing practice among American employers, and may not become so in the near future. This makes the future of work monitoring practices as a potential source of employee discontent less easy to predict than if the grievance-resolving presence of meaningful employee participation programs could be taken as the emerging trend in U.S. offices.

6. Finally, on government interventions in foreign nations of either the quality-of-worklife or data-protection type being applied to U.S. work monitoring, there are no signs that we have seen of either a need for such action

being perceived by U.S. policymakers or the desirability of U.S. governments adopting a pro-active role in these areas being registered in national public opinion. The situation here is quite unlike the worker's right-to-know movement. There, U.S. unions convinced the public and policymakers that legislation was indeed needed to disclose the identity of chemicals being used in production, and to provide a process by which harm and potential harms at the workplace could be identified by workers and their representatives before the "gravestone count" indicated problems were present. As a result, state right-to-know laws have been enacted in several dozen states despite the general "anti-regulatory" mood of the electorate. The inability of proponents to win enactment of anti-monitoring laws reflects, we believe, their inability to demonstrate the presence of widespread and harmful health effects as a result of VDT work, or to convince lawmakers and the public that collecting output data and using it for personnel administration is a violation of U.S. privacy norms.

7. The observations made above should be read in tandem with the parallel report we submitted to OTA on work monitoring techniques, practices, and policies in the United States, historically and today. In that report, and in the observations we have just made, our judgment is that the approaches and experiences that trade unions and some government bodies in other industrial democracies have taken toward work monitoring are not in basic harmony with American employee values, U.S. legal and institutional approaches, or the general directions of American public opinion. Therefore, U.S. approaches to VDT work monitoring ought to be developed with the sense that there is more difference than similarity with our sister democracies on this issue.

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EMPLOYEE PERCEPTIONS AND SUPERVISORY BEHAVIORS IN CLERICAL VDT WORK PERFORMED ON SYSTEMS THAT ALLOW ELECTRONIC MONITORING

by Elaine J. Eisenman, Ph.D.
Baruch College

Prepared as part of the Task 1 Contractor Report by

THE EDUCATIONAL FUND FOR INDIVIDUAL RIGHTS,
Alan F. Westin, President

This document was prepared by an outside contractor as an input to an ongoing OTA assessment. It does not necessarily reflect the analytical findings of OTA, the Advisory Panel, or the Technology Assessment Board.

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PREFACE

One of OTA's principal concerns in this project is to obtain empirical data about how the potential monitoring capabilities of new office systems technology are, in fact, being taken up by management and reacted to by employees. OTA is also interested in how existing management and organizational psychology literature addresses the work-monitoring issue.

As part of the Statement of Work under our contract, the Educational Fund was to have Dr. Elaine J. Eisenman explore these questions, based on her doctoral dissertation field studies at five work sites. Her analysis is contained here as a separate document. It will also be quoted and used in the empirical and policy sections of the main Task 1 report.

Alan F. Westin

A review of the management and organizational psychology literatures indicates a clear gap in research on the impact of electronic monitoring on employee perceptions and behaviors. Indeed, the primary research interest has been on antecedents of employee health and sources of stress in the workplace. This research, (cf.Bickson & Gutek, 1983; Cohen, Smith, & Stammerjohn, 1983) however, has focused solely on the reported concerns of the worker, with virtually no attention paid to the supervisor in these settings. The present study focused on both the supervisor's role and on three factors which were believed to affect the employee's perception of both the supervisor's behavior and of computer-generated performance monitoring. These factors were identified as: 1) the monitoring capability available to the supervisor 2) the supervisor's utilization of that capability and 3) the employee's perception of the control mechanisms existing in the organization.

Rationale for Present Study

The research cited above has consistently found that the VDT workers report significantly greater closeness of supervision, increases in supervisory controls, and feelings of constant monitoring, than do non-VDT workers.

Yet, despite the general acceptance of the conclusions of the above research, it is characterized by several problems. First, for the most part this research treats the VDT, in and of itself, as the only independent variable. As a result, any differences noted between VDT and non-VDT workers are attributed to the impact of the VDT alone. This interpretation, however, which is essentially an acceptance of the notion of technological determinism, is dangerously simplistic. To accept that the VDT causes worker complaints is to view the VDT as a "rational actor in its own right" (Sirbu, 1982, p. 10) rather than acknowledging that the VDT is merely a tool used to accomplish the routine technology which characterizes this type of clerical work. This viewpoint has also been voiced by Sauter and his associates (1983), who suggest that differences in employee perceptions of the psychosocial work environment do not prove that the VDT causes the problem. Instead, they suggest, that the VDT, considered by itself independent of other workplace changes that may result from its introduction, contributes little to the stress or lack of well-being of its users.

A second, related problem is that treating the VDT as the independent variable obscures the possibility that other factors in the work environment may contribute to the perceptions of the workers. A key factor in employee perceptions of the workplace may well be the supervisor. For it is the supervisor, who has long been identified as "critical to the quality of work life of the employee" (Strauss, 1977). Indeed, the perceptions of increased supervisory controls, constant monitoring and increased closeness of supervision, while linked to the use of the VDT, appear to more appropriately implicate the behaviors of the supervisor. Without research which focuses on the factors other than the VDT, however, it is not possible to determine if the supervisor makes use of the control potential made possible through the design of the system which supports the VDT, or if it is merely the employee's perception that this control and monitoring potential is fully exploited.

Other factors may also influence employee perceptions. An historical consideration of the concerns of comparable clerical workers clearly demonstrates that neither the structure nor the nature of the present environment is unique. As noted earlier, the tasks performed by the clerical workers under focus are those characterized by a routine technology, the process of which clearly predates the introduction of the VDT. Routine technologies have long been associated with highly formalized bureaucratic structures (Hage & Aiken, 1969; Ford, 1979). For these reasons, it appears likely that the view of the VDT as the sole independent variable in the work environment of the VDT employee serves to severely limit the ability of researchers to fully understand the processes which underlie the present concerns of VDT workers. A consideration of the work environment, the control systems in place in this environment and the role of the supervisor would better clarify the factors which result in the current concerns of VDT workers.

Further, it appears that supervisors in highly routinized settings are more task and structure oriented (high in initiating structure) at the expense of employee-centeredness or consideration(Yukl, 1981; Katz and Kahn, 1950, 1978). It is highly possible, then, that many supervisory behaviors are redundant with the control mechanisms imposed by the task, the technological tools, and the bureaucratic structure which characterizes the environment. While this redundance is not unique to the settings where VDTs are utilized, the VDT may well represent an additional form of control to the workers, and it is their perception of this form of control which results in their current concerns.

The VDT, moreover, is distinct from prior forms of control in that it may be perceived as insuring constant monitoring and visibility of the worker. While some degree of visibility and monitoring falls within the normative expectations of employees, the perceptions of the capability of the VDT may well serve to exceed normative expectations. As Merton (1968) has observed, the use of mechanisms necessary to meet the functional

> requirement of visibility is itself limited to the norms of the group, for if the authorities try to keep informed about the details of role performance to an extent that exceeds the normative expectations of members of the group, then this will be met with resistance or expressed opposition (p. 397).

For this reason, the extent of acceptable visibility or monitoring may well have a boundary above which the the performance monitoring is perceived as unacceptable.

The importance of normative expectations about both monitoring and supervisory behaviors has also been suggested by Barnard (1938). He identified a "zone of indifference" whereby employees react to specific supervisory behaviors and actions only if the supervisor exceeds the tolerance limits customarily adopted by the employee. This possibility has also been noted by Dubin (1974) and Likert (1961) in their observation that employees hold expectations of appropriate levels of supervisory behaviors, and that behaviors in excess of these expectations will not be favorably viewed. Further, research by Kavanaugh (1972) serves to underscore the existence of employee expectations of the proper level of guidance and structuring to be provided by the supervisor. If the amount of structuring remains at or just below the expected level, the employee does not feel imposed upon. If, however, the actual structuring exceeds the expectation, the employee would become angry and feel imposed upon. In this way, then, it appears likely that there exists differential thresholds for the perception of the violation of the proper amount of structuring. This likelihood would also extend to issues of extent of acceptable monitoring.

Consequently, a key factor in the development of the current concerns of VDT workers may well be that their threshold for optimum supervisory structuring has been exceeded. For the employee, the perception of supervisory behaviors under the design of the present technological systems may well be skewed by a combination of the redundance between control systems and supervisory behaviors, a mechanistic work environment, and the perception of control potential inherent in the VDT. The relative uniqueness of the VDT makes it a particulary salient and obtrusive form of control, especially in its perceived capacity to insure constant visibility of performance. Thus, the contextual, social, perceptual, and technical factors, taken together serve to completely exceed the employee's zone of indifference, and this process of exceeding the normative threshold can be viewed as leading to the consistently reported feelings of constant monitoring, increased supervisory controls and overly close supervision.

Hypotheses

There were two sets of hypotheses related to the anticipated differences between employee perception and supervisory role. The first set predicted significant differences in perceptions of supervisory behaviors and formalization (the extent of rule observation and procedural regulations imposed by the organization) between the VDT and non-VDT conditions only. It was anticipated that employee perceptions would not accurately reflect the actual level of monitoring, but rather that the daily use of a VDT would result in the perception of constant monitoring-regardless of the actual monitoring which was performed.

The second set of hypotheses predicted that the extent of available monitoring capability would result in differences between supervisors for closeness of supervision and consideration, but not for initiating structure.

Method

Participants

Participating Organizations

The final sample consisted of six companies, all of whom have requested anonymity. There were three unionized companies represented in the sample.

Company and Site Descriptions

General Description:

In all sites the employees sat at their work stations in full view of their supervisor, whose desk was always at the front or side of the work group. In no site was the supervisor's desk in either a separate room or in a closed cubicle. At all times the supervisors were able to check on employee behaviors by simply looking up from their desk. This level of employee visibility held regardless of the actual work station arrangement. In all but Companies B, C,and F the physical arrangement resembled a classroom, with the supervisor's desk at the front and the employees in rows in front of the desk. In Companies C and F the employees' desks were attached to one another, although separated by dividers to screen off voices while the employees talked on the telephones. The rows of desks flanked the supervisor's desk. In Company B, the desks were also attached and the supervisor's desk was located at the side of all the rows, allowing her to watch the employees actual hand movements.

Descriptions of the software capability for monitoring is provided in the next section entitled "Protocol for assignment to conditions". The actual manufacturer of the office system hardware was unavailable in most locations. For the most part, the specific software packages had been custom-designed for each company, further specifications regarding these programs were also unavailable.

Company A

Company A is a major insurance company with the home office in New England. Three sites from this company participated in the study.

Site 1: The employees were responsible for processing medical prescription claims, and used keypunch machines to accomplish this task. The employees in this site were assigned to the non-VDT condition.

Site 2: The employees were all health insurance claims processors and were assigned to the moderate monitoring condition.

Site 3: There were two groups of employees at this site. The first group were text processors who used IBM electric typewriters to transcribe dictated information received from Field and Home Office Departments. These employees were assigned to the non-VDT condition.

The second group of employees were key-to-disc operators who were responsible for both keying and verifying insurance data. These employees performed their tasks on CRTs. This group of employees were assigned to the High Monitoring condition.

Company B: Company B is a major retail organization. The site chosen for participation was located in the greater New York area. This company was unionized, and the employees were represented by the Retail Workers Union. The employees in this site were engaged in either data entry or data collection work. The data entry workers used VDTs to enter credit application information. These employees were assigned to the Low Monitoring condition. The data collection workers used VDTs in conjunction with telephones for such jobs as verification of new accounts, bill collection, credit authorization, and credit card inquiries. One group of the collection department used a computer-driven telephone system which automatically dialed numbers once the operator concluded each call.

Company C: Company C is a large public utility in New England. It is unionized and is represented by the Communication Workers Union. One site participated in this research. This site was of particular interest, as all the workers were in one room, with half the workers using keypunch equipment, while the other workers used CRTs. Both groups entered billing information. All the employees, regardless of the type of equipment which they used were supervised by the same supervisor who sat at a desk in the front of the room. The keypunch operators were assigned to the non-VDT condition, while the CRT operators were assigned to the High Monitoring condition.

Company D: Company D is an information broker for the American Stock Exchange. The employees use VDTs to enter stock and commodities transaction information. This Company is unionized, and the employees are represented by the Professional Office Workers Union. The employees were assigned to the High Monitoring condition.

Company E: Company E is a large manufacturing company located in upstate New York. All the employees use VDTs for data entry, and they were assigned to the Low Monitoring Group.

Company F: Company F is a moderately sized market research company located in New York State. The employees are responsible for conducting telephone surveys for various advertising companies. All employees use VDTs to enter data. Although their supervisors cannot access their data screens, these employees were assigned to the Surveillance condition as the supervisors would monitor the actual telephone calls.

Table 1 depicts the numerical breakdown of research sites by number of supervisory and employee participants.

Table 1

Numbers of Employees and Supervisors Surveyed at Each Research Site

Company	# Employees	# Supervisors	Span of Control
A			
site 1	26	3	8.6
site 2	68	4	17
site 3	43	4	10.75
B*	115	6	19.12
C*	22	2	11
D*	29	3	9.6
E	30	3	10
F	32	2	16
	N=365	N = 27	Average= 13.2

Note: * signifies unionized companies

Organizational Participants

Supervisors

The supervisory participants were 27 first level supervisors of non-exempt clerical level employees. The majority of supervisors had been promoted to their present position from a position comparable to the group which they were now supervising. Of the 27 supervisors, only two were black and only three were male. The typical supervisor was a thirty-nine year old white woman who had been a supervisor for three years after having spent ten years with the company in a lower level position. She had an average of thirteen years of education. Table 2 presents a profile of the supervisor.

Table 2

Demographic Profile of Supervisor

Variable *	Mean	Minimum	Maximum
Age	39.3	30.0	60.0
Time in Present Position	3.6	0.2	12.0
Time in Present Company	10.0	0.6	32.0
Education	13.2	12.0	16.0

* given in number of years

Employees

The employees were 365 non-exempt clerical workers. This group consitutes the greatest users of VDTs in terms of the number of hours per day that the VDT is used and for whom there is continuous recording of performance statistics by the computer (Westin, 1985). While the specific job tasks varied somewhat across job categories, the jobs are closely related through the techniques utilized. All job categories were characterized by minimal discretionary responsibility, standardized methods, and minimal task uncertainty, and thus can be classified as a routine technology. The job categories were:

1. Data Entry Operators (N= 169)

In general, the job description of data entry operators included the following elements: operates data entry keyboard utilizing keypunch, verify, typewriter and/or key disc equipment for majority of work day, performs necessary checks to insure accuracy of all work performed, performs a variety of clerical functions as necessary.

2. Claims Processors (N= 68):

The job description of claims processors include the following elements: reviews claim forms, medical/dental bills and reports to determine nature of illness/injury; determines coverage using protocols set by computer data base, claims manuals and bulletins; uses VDT to add and obtain essential information, lists expenses and authorizes payment in accordance with guidelines; using established guidelines refers unusual or complicated claims to another person responsible for referrals.

3. Data Collectors (N= 128):

Employees comprising this condition were all involved in work which required the constant use of telephones throughout the day. There were three subgroups in this condition. One group used the telephone to ask predetermined questions of recipients. No discretion was allowed in either the form of the question or the wording of the written answer. The second subgroup's primary task was to phone delinquent credit card users, to inform them that their account was overdue, and to ask when they would begin to pay on the account. This information was then entered into the debtor's file through their VDT and a letter was automatically generated to the debtor confirming the conversation and the intent to pay. Here, too, no discretion as to judgements regarding reasons for the overdue bill were allowed. The third subgroup responded to the telephone inquiries of salespeople regarding the credit card number of customers who wished to charge a purchase but did not have their card with them. This group also entered lost card information into the customer's file and into a company-wide alert system through their VDT.

Table 3 presents the numbers of employees and supervisors in each job category.

Table 3

Number of Employees and Supervisors Surveyed in Each Job Category

Job Category	# Employees	# Supervisors
Data Entry	169	12
Claims Processing	68	4
Data Collectors	128	7

The typical employee was a white female who had held her present position for four years, had been with the company for six years, and has had 12.8 years of education. Table 4 presents the demographic information by job category.

A comparison between the supervisory and employee groups indicates that, as a group, the supervisors are older (39 versus 33 years), and have been with the present company longer (10 versus 6 years), but have held the present position for a time comparable to their employees (4 years) and have comparable amounts of education (13 versus 12.8 years).

Table 4

Employee Demographic Information By Job Category

I. Age

Overall Mean 33.0 years

Group	Mean # years	Minimum # years	Maximum # years
Data Entry	38.2	19	65
Claims Processors	28.5	18	57
Data Collectors	27.98	15	64

II. Time in Present Position

Overall Mean 4.2 years

Group	Mean # years	Minimum # years	Maximum # years
Data Entry	7.03	0.1	30
Claims Processors	1.80	0.1	8
Data Collectors	0.74	0.1	3

III. Time in Present Company

Overall Mean 6.3 years

Group	Mean # years	Minimum # years	Maximum # years
Data Entry	10.75	0.1	35
Claims Processors	3.67	0.1	15
Data Collectors	0.9	0.1	3

IV. Education

Overall Mean 13.2 years

Group	Mean # years	Minimum # years	Maximum # years
Data Entry	12.51	10	16
Claims Processors	13.01	12	16
Data Collectors	13.34	9	18

Protocol for Assignment to Conditions

Employees were divided into two major conditions, VDT and non-VDT. The non-VDT condition was used as a reference condition, and was comprised of data entry workers who did not use VDTs and for whom there was no computer-driven performance information available. In contrast, the VDT condition was comprised of data entry, data collection and claims processing workers. All employees in this condition used VDTs and were subject to computer-driven performance information.

The research on VDT workers has typically divided workers into two groups: VDT workers and non-VDT workers. Consequently, the original intent of the research had been to investigate differences in employee perceptions and supervisory behaviors based on the presence or absence of a computerized monioring system. In the field, however, it became apparent that this simple distinction was inadequate. Instead, preliminary field visits indicated major differences between companies in the use of the monitoring capability of the computer system. Some companies had very sophisticated systems for generating extensive information about daily performance, some companies relied on the operators to record this information, and for other companies, while the system was capable of generating extensive statistics, the full capability was not necessarily used. Consequently, the original criteria for assignment for conditions was not used. In its place, the final protocol for assignment to conditions was based on the extent of utilized technology. Within the VDT condition, assignment to specific conditions was based on the actual level of monitoring of employee performance utilized by the supervisor. In this way, monitoring capability was assessed according to two central factors: sophistication of the software installed in the computer system, and extent of collection of performance statistics. Monitoring capability was defined in terms of levels, with each level constituting a condition within the major VDT condition. The specific conditions were:

VDT Conditions

1) Survellience (SM): The supervisor accesses ongoing performance information through his terminal and/or telephone without the employees knowledge of the actual time when monitoring occurs.

2) High (HM): Extensive performance information (i.e. keystroke rate, number of explained/unexplained pauses, error rate , errors corrected and uncorrected, number of completed jobs) is available throughout the day, but the supervisor does not access ongoing information through his or her terminal.

3) Moderate (MM): Extensive summary performance information (i.e. number jobs completed, complexity of jobs, number errors, keystroke rate) is available on a daily basis only. There is no systems capability for accessing ongoing performance information.

4) Low (LM): Daily performance statistics are available but are limited to rate, number of completed jobs, and number of errors. There is no systems capability for accessing ongoing performance information.

5) Non-VDT: Employees use either keypunch machines or typewriters. There was no linkage between these types of

equipment and a central computer system. Consequently all performance information was based on checking completed output or on the employees themselves keeping records of their keystroke and error rates.

For example, a designation of Surveillance would be given if the computer system was capable of collecting ongoing performance information and it was technically possible for the supervisor to access this information without the employees' knowledge at any time during the day. If, however, the supervisor in this setting did not have his or her own terminal, and consequently was not able to access ongoing information without the employees knowledge, the condition designation would be High Monitoring. Condition assignment, then, was on both the performance information which was generated by the computer and indicated on a printout and the investigator's observation of the supervisor's potential monitoring capability based on that supervisor's reported utilization of the available technical equipment. Consequently, conditions were assigned after the site visit and data collection. Table 5 presents the numbers of employees and supervisors listed by condition and job category.

Table 5

Number of Employees and Supervisors Surveyed: Listed by Condition and Job Category

Condition	Job Category	# Employees	# Supervisors
Non-VDT	Data Entry	41	6*
VDT Conditions Monitoring Level			
Low	Data Entry	49	4
Moderate	Claims Processors	68	4
High	Data Entry	79	8*
Surveillance	Data Collectors	128	7

* Two supervisors were responsible for the supervision of both a group of keypunch operators (MDE) and a group of VDT operators.

Section Three

Measures

Two sets of measures were utilized in this research. The employees were given a paper and pencil questionnaire which measured perceived formalization, initiating structure, consideration structure, and closeness of supervision. The supervisors were given a different form of the same questionnaire which allowed for self-report of their own methods. In addition, each supervisor was interviewed regarding their methods of supervison and their utilization of the computer system's monitoring capability. All questionnaires are included in the appendix.

Questionnaire Framework

The questionnaire was divided into three sections, with a total of forty-six items, and a demographic information page. In the employee questionnaire, the first section focused on the employee's perception of their present job and their assesment of their supervisor's general style in terms of consideration and initiating structure. The second and third sections focused more specifically on the content and frequency of specific kinds of communication received from their supervisor, and the final section looked at the employees' view of the ways in which their supervisor spends his or her time during a typical week.

RESULTS

Content Analysis of Supervisor Interviews

Each supervisor was interviewed in an attempt to gain additional insight into their methods of supervision. Additionally, it was anticipated that these interviews would allow for a better understanding of exactly how much impact the ability to monitor computer-generated performance information has on the relationship between the supervisors and their employees. The interviews also provided the opportunity for unobtrusive methods of assessing the work environment and the nature of this relationship. This opportunity was possible as all interviews were carried out at the supervisor's desk during the work day. In this way, I was able to sit and observe for an extended period of time as the supervisor was frequently called away from her desk. In this way, the use of the interviews and unobtrusive observation can be viewed as providing convergent validation of the questionnaire results (Jick, 1983).

Descriptions of a Typical Day

First, a consideration of supervisor answers to the questions "Describe a typical day here" and "What are some of your daily headaches? How do you handle them?" serves as the basis for the supervisors' beliefs, which will be discussed in a later section, that the extent of daily workload demands eliminates the possibility of taking time to monitor the performance of their employees.

In response to the first question involving the typical day, there were few points of difference between the specific tasks required of the supervisors. Essentially, for all supervisors, the day was described as "a zoo" involving "constant movement". The primary responsibilities were to check the work load and set work priorities based on specific deadlines for each piece of work. Then, attendance was checked in order to determine individual workloads. Once this was completed, work assignments were made. In some settings assignment clerks or senior level workers were responsible for distributing assignments. The remainder of the day was spent making sure that deadlines were met, dealing with work and system problems, checking production sheets, and generally "trouble-shooting". Only the supervisors of the surveillance group included "monitoring" as a daily activity. In these settings, as noted in the introduction, monitoring took on a structural quality as daily monitoring was written into the job descriptions of both the supervisors and the employees. Yet, even in these settings, monitoring did not assume a high priority.

Daily Priorities

This set of questions focused on the most and least important parts of the supervisory job. Here, too, there were no major distinctions between conditions in the pattern of responses. As was anticipated, the most important part of the job is "getting the work done on time" or "maintaining the work flow", although several supervisors adapted this goal to be one of "getting the job done through your people" (a moderate monitoring supervisor) and "acheiving results through people" (a surveillance supervisor). One high monitoring supervisor's response, while ostensibly in agreement with these two statements, provides a different twist to the goal. She answered, "keeping on top of the people, making sure they keep to the standards".

As noted above, the most frequent response to the "least important job aspect" question centered around such tasks as"paperwork", "answering memos", "written reports" or "checking time clock cards". One low monitoring supervisor noted that "checking performance stats, especially when we're real busy, is a stupid waste of time".

Utilization of Monitoring Capability

The question "how often do you collect performance information about your employees" was central to the present study. It was anticipated that this question would provide the most information regarding the use and potential impact of varied levels of monitoring capability. The responses to this question serve to confirm the lack of consistent relationship between monitoring capability and both employee and supervisor perceptions. One extremely surprising finding was the fact that in many ways the supervisors are not fully utilizing the capability of the system. As one high monitoring supervisor stated " Oh, I could use 'op stat' [operator status] to look into

> any of my operator's terminals and see what they're doing, but it takes too much time. It's easier to walk or glance around the room to see if they're working. In a place like this, its hard to pretend to be busy if you're not."

This viewpoint was echoed by another high monitoring supervisor who said "Yes, I get daily stats, but they're rarely used. I can tell if the work isn't done from the total department output. It's an issue of pulling your own weight. I have more pressing and important things to do than kill time checking output."

Similarly, a moderate monitoring supervisor explained, "It's just too much trouble to watch who's doing what. That alone could be a full time job for someone, but who needs it. I must rely on my people and assume that they're not abusing the system."

And, last, a surveillance supervisor observed, "I don't have the time and I don't think its necessary to constantly monitor calls. I do it every so often, but I really have more important things to do. Anyway, my desk is so close to my people, if there are any real problems I can hear them without listening in."

Of particular interest was the fact that the most frequently identified means for supervising the employees was the same methods identified by Katz and Kahn in the early 1950's: "roaming around" "looking around when I'm on the phone or talking to someone", or as one high monitoring supervisor remarked, "nothing special really, but the girls know I keep an eye out".

The lack of any perceived need for formal monitoring can also be seen in an example of the determination of performance statistics for a non-VDT site. Here the workers type insurance claim information onto forms from information which is given through a dictaphone. On each typewriter there is a keystroke counter. After the completion of each form, the worker enters the number of keystrokes which were recorded on the counter and sets the counter back to zero. She then counts the errors and enters that number also. At the end of the day, the supervisor collects the hand-written sheets and sends them to data processing which computes the keystroke and error rate and sends back a printout listing these rates. The supervisor explained the system as "it's

> an honor system. Once a month we do spot checks for errors and rates, but that's much too time consuming to do daily. The only thing that matters is that the work gets done."

A similar honor system occured at another non-VDT site. Here the keypunch operators count the number of cards they have completed at the end of each day, and submit the number as well as the total time which they have worked. These numbers are then tabulated to determine the rate per hour for the worker. When asked if anyone ever tried to beat the system, the supervisors in both settings where quick to point out that it would not be possible on an ongoing basis. Although there were no daily checks, there were unannounced spot checks, where "the girls

> never know who's going to be checked or when. They do know that if there's a big difference between what they've been reporting and what I find, there'll be hell to pay".

Thus, for two situations which appear, on the surface, to allow for far greater freedom and leeway than would be possible in VDT settings, the norms and continual expectation of being checked without prior warning serve to constrain behavior in much the same way as ongoing operator statistics.

The lack of reliance on computer-generated information is perhaps best exemplified by the statement of a surveillance supervisor who said "Oh, yes, the computer collects more information that I could ever use". This sentiment was also apparent in the fact that in many of the high monitoring settings, supervisors did not have terminals on their desks. Thus, even though several of the systems in use allowed for surveillance, there was no way to take advantage of this capability. When one supervisor was asked about this omission, she replied "If I had a terminal, I'd have to get rid of my

> plants. That's how important it is to me. I don't have time to use it anyway!"

Views of Computer-Generated Performance Information

Supervisors were also asked about how they viewed the use of computer-generated performance information. Specifically, they were asked "Some people feel that when performance information is constantly recorded by a computer it may create lots of problems between the supervisor and the employees. Do you feel this is/could be a problem here?" The responses to this question also were consistent across conditions. There was general agreement that, whether the information is fully used or not, it is important to have "objective" information. One non-VDT supervisor, who had once worked in a computerized setting, observed, "that set-up is great. When you can actually see the

> work measures you have something tangible to talk about. Performance discussions and evaluations can't be taken personally. The information is all in black and white.'

Another non-VDT supervisor, however, expressed the concern that "individual differences wouldn't be taken into account with a system like that. It would just mean more work."

All the other supervisors, however, agreed with the first cited respondant, with the majority noting the importance of how the information is used. For example, a low monitoring supervisor explained

> "It's a good idea as long as it's used fairly and not for constant monitoring. It might be a big threat for poor performers, but they could be helped to view it as a way to learn."

A second low monitoring supervisor observed "When we first got

> the system I felt like big brother watching all the time. Then I got used to it and so did the employees. You can't use it as a threat or punitively. You must say 'Aren't we lucky to have a system which lets us see improvements so easily'".

The importance of fairness was also echoed or implied by the other supervisors, irrespective of monitoring level. Examples of statements from the surveillance condition include:

> "It all depends on how constructively its used. As long as there's a good relationship the monitoring aspect doesn't matter."
>
> "There aren't any problems as long as there are no secrets. If the information is used immediately as a teaching tool its viewed as helpful. It's the supervisor's job to help the employee overcome the feeling of being beaten on."
>
> "The real issue is how self conscious you feel when you know you're being monitored. With the old system the phone clicked when someone was listening in, that made everyone real nervous and self-conscious and angry. Now there's no click so you don't have to think about it and its accepted more easily."
>
> "It's fine as long as it's above board."

Representative examples from the responses of high monitoring supervisors include: "It's not the stats that are the problem,

> the stats are just a convenient excuse for anger at management over pay and working conditions."
>
> "Workers always compare salary and raises. With stats you can prove or disprove the typical complaint that I work harder but everyone else gets paid more money."
>
> "The computer is rarely wrong. The employees feel safe that I can now justify complaints about unfair

workloads."

Last, representative responses from the moderate monitoring group include: "Everyone has bad days. With the computer I can easily determine if the day is an exception or a trend. Also I can determine the exact nature of the problem, and can teach based on some problem which the system has identified."

> "It all depends on how it's presented. The system itself is fair, there's lots of protection built in. It allows for lots less subjectivity and as a result lots more fairness."

> "With the system there's no surprises. Everyone knows where they stand. Employee ratings can be challenged for favoritism or being picked on."

Thus, the importance of fairness and the belief that the proper use of the system is for the benefit of the employee is a constantly recurring theme among the supervisors across all conditions. Unfortunately, despite the almost idealistic presentation of the benefits of these systems, very few supervisors used the performance information as a basis for ongoing training and feedback. As discussed earlier, in general, the actual monitoring of performance for actual use was virtually a visual monitoring, and the generated performance statistics were routinely filed away for annual performance reviews. The only company in which the statistics were used more often, was in Company A in the sites where a bonus program for exceeding the established standard was in effect.

Identification of Employee Concerns

The final question focused on employee concerns, and sought to determine if the extent of monitoring capability affected the supervisor's insight into the concerns of her employees. The question was "What are the main gripes or dissatisfactions of your employees? Do you agree that these are important issues?"

Here, too, with one exception, the supervisors in all conditions appeared highly sensitized to the concerns of their employees. Further, these identified concerns were comparable across conditions. The one exception was a supervisor from the surveillance condition who answered "Some people may feel degraded, but so what". This answer, however, was unusual in its lack of sensitivity and concern, and can not be viewed as representative of any other supervisors. The typical responses focused on the work environment, and, as such, reflect the concerns cited in the introduction of this paper. As a high monitoring supervisor observed, "the work itself is dull and boring, what else can you say, it's a day's pay, but it's too much work, too much pressure, and too little pay".

This theme was repeated by a majority of supervisors: "there's constant pressure to perform", "its monotonous", "too much job insecurity", "no career paths", "the room is disgusting" "the environment is fit for computers, not people - it's too cold and too noisy". The pay system was also viewed as a source of concern: because these workers are not salaried, " they have to decide if they can afford to take a lunch or bathroom break. They lose money if they do." A related problem was also identified as the fact that workers do not get paid during systems down time, as they are not logged in and working. A similar concern is the need for workers to account for "every second spent during the work day". In all cases, the supervisors agreed that these concerns were valid, and voiced dissatisfaction at not having the power to improve the conditions. Thus, with the exception of the first quoted supervisor, it appears that the supervisors are very concerned and sensitized to the working conditions and problems of their employees. One reason for this high sensitivity, of course, may be the fact that, without exception, all the supervisors had been promoted to their present position from a clerical position.

Union vs. Non-Union Perceptions

The Unions have consistently held that the high degree of stress and health related problems which appear to characterize VDT clerical workers are largely caused by the lack of control over the work process and the greater degree of closeness in supervision which occurs through VDT monitoring. Further, they have indicated that the key complaints and concerns of employees are those which concern the degree of monitoring which occurs through the VDT. Indeed, given these stated concerns, it was anticipated that both the supervisors and employees who participated in the present study would be most vocal on the issue of monitoring. It was also also anticipated that there would be significant differences between both supervisory monitoring behaviors and employee-stated concerns in unionized vs. non-unionized companies. Such was not the case, however.

In general, there were few differences between the statements or monitoring behaviors of supervisors in union versus non-union companies. There was one key difference between unionized and non-unionized companies, however. This difference centered around the supervisor's perception of the usefulness of of the computer-generated performance information. As was discussed earlier, while neither group of supervisors professed to use the information in a systematic or regular manner, the supervisors in unionized companies were much more vocal in their belief that the use of the information was not a priority. Moreover, this group of supervisors indicated that the collection and use of this type of information was essentially "worthless". As one supervisor stated, "the only purpose that it serves is to

> protect me from a grievance action. Then I have proof that I'm right, because the numbers are all there. Otherwise the information just collects dust in a folder. It isn't used for anything since the union controls pay increases and promotions. If they don't care about performance, why should I?"

This observation was representative of the feelings of other supervisors in unionized companies, and was in sharp contrast to the supervisors in non-unionized companies who felt that if they had the time to use the information their employees could benefit.

A second distinction between unionized and non-unionized companies could be seen in the nature of employee responses to my presence. At the end of the period in which questionnaires were filled out, the employees were asked if they had any comments or questions. As noted above, it was expected that there would be many questions and comments regarding the monitoring behaviors of the supervisors. Interestingly, The only questions were from employees in the unionized companies. These questions, however, did not center on monitoring, as was anticipated, but rather were always related to health and stress issues, reflecting a high level of awareness of current legislative and health-related concerns. For example, these employees typically asked about my knowledge regarding the effect of VDTs on vision; another major concern was the effect on pregnancy and the fetus. Because the employees appeared to view me as an expert on VDTs, I was asked for my opinion regarding the "truthfulness" of the information which they had received from their union. An aspect of this behavior which was particularly interesting was that only the unionized employees demonstrated this awareness and willingness to ask about these issues. Although there were occaisional comments from the employees in non-unionized companies, their comments usually focused around the notion that the questionnaire did not ask for opinions on the monotony and boredom of the job.

Last, many employees made comments in a more or less bantering fashion while I reviewed the instructions for questionnaire completion. No comments, however, were made regarding the questions which related to monitoring. Instead, the comments further emphasized both groups inattention to issues of monitoring. Here, the majority of comments, from both unionized and non-unionized employees tended to center on the last page of the questionnaire. This page asked respondants to estimate how much time during the week their supervisor spend on eight different supervisory tasks. The scale for responses ranges from 1 (a minimum amount of time) through 7 (maximum amount of time). Typically, on this page, the employees would ask if it was possible to enter "'0' for doesn't work at all". At that point there would be a great deal of laughter and the employees would state their intention to answer in this way. They would then request that I show these results to their supervisor's "boss". Again, as was discussed regarding the supervisor's responses, the issue of the stress which has been alleged to stem from constant monitoring was not vocalized as a major concern for the employees who participated in the present study.

As this finding was so unexpected, I contacted two management representatives from the participating unionized companies and one union representative in order to ask for their opinions as to the contrast between my findings and those consistently reported by the unions. There was a clear cleavage between the responses of the management representatives and those of the union. The management representatives both stated that my results were not unexpected- they both said essentially that they had always believed that the employee-union results were largely overblown and non-representative of what actually occurs. One manager focused on the use of supervisory time and confirmed that the job description of the supervisor is focused primarily on meeting work deadlines. He said that supervisors are not properly trained to supervise and that consequently it would not be expected that they would have any idea as to how to properly use the performance information - even if they did have the time to consider it. The only union representative that I was able to reach (Communication Workers Union) said that my results were totally at odds with everything that he has heard, and that he had a difficult time understanding how I could have had these results given the fact that "people in these jobs have lost total control over their jobs, and are literally dying from the stress from monitoring and other health and safety hazards". This representative suggested that the only possibility for my findings were that the locations I used were highly unusual, or that I did not ask the "right" questions.

In summary, the interviews with the supervisors served to confirm the lack of significance of monitoring capability on supervisory perceptions and behaviors. In the interviews there were no trends or patterns of responses that in any way paralleled the extent of the supervisor's monitoring capability. Instead, the comparability of perceptions and attitudes among supervisors of all conditions was confirmed.

These findings call to question the necessity of legislation which seeks to prohibit the collection of computer-generated performance information. Although the present study did not include employee interviews regarding monitoring and the collection of computer-generated performance information, the data from the questionnaires coupled with the relatively informal discussions which transpired both before and after the questionnaires were filled out, provides an important counterpoint to the widely accepted view that the issue of monitoring as a major source of workplace stress is both primary and all-pervasive for clerical VDT workers. It is here that the question of methodology and the presentation of questions becomes important. As noted earlier, the present study did not present the VDT as solely responsible for all the perceived stress in the workplace. Instead, the VDT and the issue of monitoring was viewed as but one piece of the total social and technical system. Perhaps the broadening of focus, and the lack of attempt to identify the VDT as the source of stress allowed for the employees to voice their own concerns without being specifically focused on researcher-identified concerns alone.

Quantitative Data

In general, there was only minimal support for the hypotheses of differences between the VDT and non-VDT conditions for both supervisors and employees. Additionally, there was no consistent pattern in the relationships between the extent of the supervisor's monitoring capability and employee perceptions. Instead, as was true for the interview data, support was found for the relative similarity in perceptions of both supervisory behaviors and formalization across all conditions. This pattern of results was also found for the one question which specifically asked about monitoring, "People here feel as though they are constantly being watched to see that they are working". There was no significant difference between conditions in the pattern of responses. This lack of significant difference was also found in a comparison of the unionized and non-unionized companies. In this comparison, however, there was a significant difference for the perception of formalization. Here, the employees in the unionized companies perceived less formalization or rule enforcement than did those employees in non-unionized companies. Despite the statistical significance of this difference, however, both mean scores were around the midpoint.

Table 6 presents a summary of the range of supervisory and employee scores according to monitoring levels for the variables under investigation. Here, too, the scores fell primarily in the moderate to low range for all constructs. The scale in this Table ranges from 1 to 5, with a score of 1 indicating the highest score and 5 indicating the lowest.

Table 6

Ranked Mean Scores For Each Variable:
Supervisors and Employees

	Variables						
	Closeness of Supervision		Consideration		Initiating Structure		Formalization
Monitoring Level	E	S	E	S	E	S	E
non-VDT	*5	2	2	5	2	5	1
VDT Conditions Monitoring Levels							
Low	4	1	3	3	3	4	3
Moderate	1	1	1	1	1	1	4
High	3	4	5	4	5	3	2
Surveillance	2	4	4	2	4	2	5

* #1 is the highest ranking. i.e. 1= highest perceived closeness

Note: The ranked scores are based on relative scores within the actual range for each scale. The rankings do not indicate significant differences between conditions.

As is illustrated in Table 6, the only consistent pattern of scores is for the employees in the moderate monitoring condition. This pattern, however, highlights issues outside the realm of monitoring capability. This condition was the only condition using a single site and a single job category - claims processors at Company A, Site 2. The claims processors are different from all other job categories in that the nature of their work, while providing the illusion of discretionary judgement, actually requires constant input from the supervisor regarding protocols for the awarding of claims. It is possible that the relatively high amount of interaction results in a difference in perception from the other conditions. Additionally, the fact that the site is unique makes it possible that the pattern of differances are also related to site management and culture.

Here, interview and observational data provide additional insight into the importance of the nature of particular management techniques. The supervisors of the employees in the moderate monitoring condition appeared, as a whole, more involved with their employees than did the supervisors in other sites and companies. While this level of involvement could not be identified solely through interview data, extended observation of both the setting and of the nature of supervisor-employee interactions did corroborate the distinctions between this site and the others. In three of the work groups the supervisors gave stickers (of the type given in grade school for good work) for high performance. Consequently the terminals were frequently decorated with the stickers, additionally, employees were allowed to have personal effects such as family pictures, children's artwork, etc. on their desks. Last, this site was the only site in which live plants were used to decorate the setting. These artifacts resulted in the physical setting having a more personalized and less 'sterile' appearance than was typically found in other sites. Another difference, although it is reflective more of an individual supervisor's style, was that this particular supervisor held a monthly "stupidest error" contest where the employee with the "stupidest" error of the month was expected to buy drinks for the entire work group and the supervisor on the last Friday of the month.

These examples, while not of major significance, can be seen as examples of higher levels of "employee-orientation" than was apparent in any other site. Consequently, they can not be attributed to company differences, as there were other sites which did not appear as employee-sensitive as did the supervisors of this site. These non-VDT related factors serve to underscore the importance of looking beyond monitoring and into other task related factors in assessing employee perceptions.

Implications

The relatively moderate levels of mean perception scores, the lack of a strong relationship between monitoring capability and employee perception, and the relative underutilization of monitoring capability as expressed through the interviews, strongly suggest that, for the sites under focus, supervisory behaviors fall within the normative expectations of the employees and consequently VDTs are accepted and not viewed as overly intrusive.

Similarly, these findings highlight the role of the supervisor in determining the extent of usage of the available technology. The relative underutilization of the full capability of the computer systems was a most surprising finding. While one reason for this may be the lack of time to do anything but meet daily workload demands, acceptance of this factor alone may be overly simplistic. Another more potent reason may have been provided by a supervisor who stated: "if there's too much automation, you might lose the need for the supervisor. That's why its so important to keep the human touch in there. I wouldn't want my job taken over by a machine." That supervisors frequently manifest their fears regarding job security through sabotage has been demonstrated by Walton (1975). It is possible that underutilization may represent a subtle form of sabotage, one precipitated by fears over job security issues. The issue of job security has been addressed in terms of the worker, but has not been typically viewed as a supervisory issue.

This pattern of findings also reinforces the importance of recognizing that computer-based performance monitoring is not solely responsible for the stated concerns of VDT clerical workers. Instead, as discussed earlier, the total work-place environment, and, perhaps, more significantly, the relationship between the supervisors and the employees are far more responsible for the worker's reaction to performance monitoring.

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THE INTERNATIONAL CONTEXT OF LABOR-MANAGEMENT RELATIONS:
IMPLICATIONS FOR WORKPLACE MONITORING

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Prepared for the U.S. Congress, Office of Technology Assessment,
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INTRODUCTION AND FINDINGS

Because the American economy is so tied in to the global economic structure, increasing attention has been given to approaches in other industrial nations in their efforts to maintain a competitive edge and best adapt microelectronic technology. This has involved governmental policies and actions and the wide range of labor-management relations. This chapter explores some of the international developments and notes contrasts with the United States, and some potential lessons with regard to managing the new technology and systems of labor relations and issues relevant to workplace monitoring.

A number of findings come from this review:

1. The American labor relations system and labor law model differs importantly from many other industrial nations. The higher rates of unionizations, existence of labor parties, and tradition of governmental involvement in the labor-management arena distinguishes most other industrial democracies from the U.S.

2. A more developed tripartite government-labor-management approach to industrial policy, economic development and growth has been developed in most of our competitor industrial nations. This approach has no real equivalent in this country, but we note increasing calls for some efforts in this direction.

3. A tradition of worker participation, including employee involvement in applying new technology in factories and offices, is more developed in other industrial countries. However, there is well-established international communications system across management and union circles which has shared quality of working life and participative management experiences. There is evidence of a substantial growth of this philosophy in the American labor-management relations community and a new Federal government initiative in the U.S. Department of Labor.

4. Since collective bargaining covers only one-fifth of the American work force, other initiatives have been explored by advocates and policymakers, including the use of occupational safety and health laws and agencies, somewhat parallel to the work environment laws in oter nations which have addressed job stress, work organization and technology concerns. Concern over health effects, stress related worker compensation claims, are among the driving forces for reform here. Thus far, only modest changes in federal legislation and standards, such as

the OSHA hazard communication standard, have been seen; more activity seems focused at the state and local level tied to VDT worker protection and the like. European developments have been a significant stimulus for some of this effort.

5. Issues of privacy and rights of employees are treated in some other industrial nations in a broader socio-political context with proactive legislative initiatives promulgated. The pattern in this country is more towards taking a reactive stance, and addressing alleged abuses after the fact through collective bargaining and other remedies focused on the workplace. The American pattern is likely to continue, although there has been a noteable increase in the concerns over privacy and employee rights expressed by unions, citizen action groups, and policymakers.

6. The force of law, tradition of labor-management relations, and the current economic and political milieu have shaped the American approach to dealing with the new technology at the workplace, including electronic monitoring. It is a model which is different in important ways from the more centralized, regulatory, legislated model of employer-employee relations in many other industrial nations. While voluntary and recommended styles of participative management and other approaches towards dealing with microelectronic technology developed abroad may have growing influence in the United States, there will continue to be a distinctly different approach taken in this county in the foreseeable future.

REASONS FOR INTERNATIONAL PERSPECTIVES

The past decades have altered the global economy such that it is essential to understand the American economy and the world of work within an international perspective. This is the case for many reasons. First, US based multinational corporations have invested a substantial portion of their capital and production facilities outside the country; they are indeed multinational or global firms albeit American owned. Second, US firms are involved in a large number of joint ventures with foreign firms and governments, both abroad and within the United States. Third, foreign firms have increasingly invested and developed production facilities within this country--from auto to electronics. And, fourth, this international competitive environment has increased the sensitivity of American managers, employees, and unions to varied approaches in such areas as labor relations, organizational structure, managerial style, and technology at the workplace.

This increased awareness has been facilitated by the considerable movement of managers across national boundaries and the communications and visitations involving employee and union delegations as well.

The internationalization of the American economy has resulted in a great deal of information flow between the United States and other industrial and developing nations. In particular, it has led to reciprocal influences between the industrial nations of the world. For example, U.S. managers study workplace experiments in Western Europe; Japanese managers try to apply their approaches in U.S. production facilities; and U.S. unions meet with their counterparts employed by US multinational firms, such as in the case of autoworkers in Ford Motor Company facilities world wide. The technology of production in factory and office settings is transnational and this interchangeability also has furthered interest in international experiences.

There are considerable variations among the industrial nations in terms of their labor-management systems, approaches to dealing with technological change, the role of government in the economy, as well as the strength and economic and political role of unions. In the 1950s and 1960s, many European nations experienced labor shortages and relied upon "guest workers" from other less developed nations; in the U.S., that has never been the case. Many of the social dynamics of the 1960s, however, were common across national boundaries and cultural differences. The wave of interest in participatory democracy affected all industrial nations, and the factors which gave rise of work reform concerns in the U.S., were common in most nations in the West.

Electronic monitoring is but one facet of the microelectronic technology capability. The potential is transnational and the issues raised are also international. Equally important, the application and policy outcomes are variable. This chapter is designed to explore some of these international influences and experiences as they apply in the American work setting.

AMERICAN LABOR-MANAGEMENT RELATIONS UP TO THE MODERN ERA

A longer treatment of the history of work and labor-management relations has been given in this report (Chapter 3). What might be most directly pointed out is that several threads have unfolded in this century, some of which have continued and some have been partially replaced. The Scientific Management approach developed by F.W. Taylor was built upon some basic assumptions about industrial production and efficiency tied to the division of labor, scientifically measured job tasks, and economic incentives for workers. Some tendencies in this vein continue into the present time. However, beginning in the 1930s and developed in the 1940s and beyond, there emerged the Human Relations approach fostered by E. Mayo and colleagues at Harvard Business School. This philosophy emphasized the social aspects of work and the importance of social support from fellow workers in helping to determine worker productivity. Variations on this theme continue to the present. The Human Relations approach did not replace Scientific Management, and by the 1950s, the issue of power and real differences between managerial and employee interests were more accepted in many managerial theories. The challenge was to attempt to integrate work organization goals--harmony, productivity, profits--with those of the employees.

The evolution of dominant managerial philosophies did not occur in a vacuum. Rather, they reflect the shifts in the work force, the growth of unions, and the significance of the collective bargaining mechanism which protected workers and established contractual conditions of employment. The fields of industrial psychology and sociology saw considerable growth during the Second World War with studies of group morale, productivity, and worker relationships. Such studies made it clear that real differences or conflicts exist and that efforts to alter morale, job satisfaction, and productivity would need to acknowledge these. "Cow sociology" was the phrase derisively used to denote those managerial approaches which sought to gloss over employee concerns and attempt to make workers contented without addressing their real interests.

The social climate of the nation began to change in the late 1950s with the beginnings of protest by Black Americans against the institution of racial segregation. From the Hollywood image and popular books such as The Man in the Grey Flannel Suit, the nation was challenged by scenes of federal troops enforcing school desegregation in Little Rock and Dr. Martin Luther King, Jr. organizing a boycott of Jim Crow buses in Montgomery. By the 1960s, a wide range of social movements had organized on the issues of empowering people to make decisions affecting their lives and cries for "Black Power," "Student Power," "Community Power" were heard.

Not surprisingly, the issue of involvement in the workplace, where we spend one-half of our waking hours, was articulated as well. While there were some differences between the United States and European countries in terms of social issues of the times, the 1960s saw very similar movements for change by students, environmentalists, women, and community activists. The European milieu fostered more experiments related to work and the economy and the results of these became publicized in the United States in the late 1960s and early 1970s.

The changes which have been outlined earlier in this report [Chpt. 3] influenced the shifts in managerial philosophy and labor relations. The occupational structure in the post-World War era revealed a marked growth in the services with a decline in manufacturing, and a substantial growth in public sector employment. The proportion of women workers increased and the sectors of the labor force which were organized shifted to include more government workers, white collar and professional workers, as well as more women and racial minorities. New approaches to union organizing were developed which stressed issues of work environment and employee influence.

Federal and state legislation increased with amendments to the National Labor Relations Act, relevant sections of the Civil Rights Act, and other laws. The American labor relations framework is based upon a system of voluntary unionization and free collective bargaining which stands in contrast to nations with legislated approaches to decision-making at the job.[1] This approach distinguishes the US industrial relations system from some other industrial nations. Yet, there is a role played by government in terms of wage, health, nondiscrimination and other forms of protection. The government has a system of arbitrating cases, hearing cases in courts of law, and well-utilized mediation and conciliation services. Thus the labor relations system which evolved from World War Two through the 1960s was to a considerable extent tri-partite, yet distinguishable from systems developed in other nations.

By the end of the 1960s, the changing occupational structure, new technology, and global economic shifts posed new challenges for the American economy and management. There was growing interest in international developments and experiments in employee involvement that were being undertaken in Europe. This period marked the entry into a new phase of labor relations with a markedly changing global economic climate.

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[1] The distinction is examined in Steven Deutsch, "Voluntaristic vs. Constitutional Approaches to Worker Participation," Comparative Labor Law, Vol. 2 (Summer, 1977).

INTERNATIONAL DEVELOPMENTS IN LABOR-MANAGEMENT RELATIONS FROM THE 1960s

The broad efforts around the world to push for various forms of participatory democracy in the 1960s took many forms. In some contexts the discussions were joined with older movements for change, such as the Fabian socialist tradition in the British trade union movement. Regardless of the particular form, by the 1970s the issue of participation at the workplace, or industrial democracy, was a major feature of discussion and implementation in the industrial relations systems throughout the West.

There were a number of sources for this phenomenon. First, there was the influence of self-management theory and practice, notably in the model of Yugoslavian self-managing socialism. Second, there were the models of co-determination, such as in West Germany, which had their genesis in the 1930s and were altered in the 1950s designed to have functioning delegate works councils to facilitate workers influence in decision-making. In the 1970s and 1980s, a major "humanization of work" program was developed in the FRG, administered by the occupational health and safety ministry. Third, there emerged a new tradition of applied research in the 1960s based particularly at the Tavistock Institute in England and the Work Research Institute in Norway, emphasizing employee participation and democratization at work. There were a series of management initiated interventions and planned changes to give employees influence at the workplace which were systematically studied. Attention was given to the psycho-social factors of work, e.g., job satisfaction, morale of workers, and the quality of social relations; other research focused on such performance factors as productivity and efficiency. The Industrial Democracy Programme in Norway was a pioneer in this field and influenced industrial practitioners and researchers in many countries, including the United States.

By the early 1970s, the interest in job redesign, human engineering, work reform, or whatever term was in vogue, was world-wide. The first international conferences on participative management and quality of working life were held in 1971 and 1972. The experiments undertaken in Europe were of considerable interest to American industrial managers, employee representatives, practitioners, and industrial researchers. The key issue seemed to be that increasing employee involvement spoke both to the restlessness and militancy manifest by workers in the 1960s and to managerial desires to have improved quality of working life and effective work organizations.[2]

In some countries there was a clear philosophy of extending more power to workers as part of the overall program of democracy envisioned by the government. This is clearly the case in Sweden where the Social Democratic Party has a long-term program to establish political democracy, social democracy, and finally economic democracy through incremental legislative reforms. When, in the late 1960s, the Swedish labor movement turned to issues of greater worker participation both at the workplace and in the economy, the Social Democratic Party translated these demands into legislature goals. In sequence during the 1970s, the following laws have been passed:

Act on Employee Representation on Boards;
Security of Employment Act;
Promotion of Employment Act;
Act on the Status of Shop Stewards;
Worker Protection or Safety Act;
Act on Employee Participation in Decision-Making (MBL);
Work Environment Act;

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[2] The mood of the period and developments in Europe are reviewed in Solomon Barkin (ed.), Worker Militancy and Its Consequences, 1965-1975: New Directions in Western Industrial Relations (NY: Praeger, 1975).

and in the early 1980s,

Wage-earner funds.[3]

A similar series of reforms were implemented in Norway allowing worker representation on corporate boards and other means of participation.[4] The issue of "management prerogatives" and what constitutes appropriate employee involvement has naturally been raised in Europe as in the United States. The 1970s saw a substantial expansion of the agenda for European unions and they have bargained over the introduction of new technology, work and job design, production systems, organizational planning, and company investments. The legislative arena continues to be significant in those countries with such traditions, including Scandinavia with its history of relatively cooperative labor relations, Germany, and Holland. In England, Australia, and Canada, the adversarial labor relations model is closer to the United States, and therefore, they continue to rely upon collectively negotiated agreements between employers and the workforce rather than legislative solutions. It is important to note the considerable variations across national boundaries in the size and strength of the labor movement: from 90 percent of the workforce in Sweden, to 50 percent in England, and 20 percent in the U.S.

In addition to legislating co-determination, which was done in Sweden and expanded in Germany in the late 1970s, some countries have passed work environment laws which mandate employee involvement in planning and designing

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3. Sandra Albrecht and Steven Deutsch, "The Challenge of Economic Democracy: The Case of Sweden," Economic and Industrial Democracy Vol. 4 (August, 1983) pp. 287-316.

4. Bjorn Gustavsen and Gerry Hunnius, New Patterns of Work Reform: The Case of Sweden (Oslo University Press, 1981).

work and technological changes in the workplace. There is an explicit section on technology in the Norwegian Work Environment Act of 1977; to wit, Section 12:

> General requirements. Technology, organization of the work, working hours and wage systems shall be set up so that the employees are not exposed to undesirable physical or mental strain and so that their possibilities of displaying caution and observing safety measures are not impaired.
>
> Conditions shall be arranged so that employees are afforded reasonable opportunity for professional and personal development through their work.
>
> Arrangement of work. The individual employee's opportunity for self-determination and professional responsibility shall be taken into consideration when planning and arranging the work.
>
> Efforts shall be made to avoid undiversified, repetitive work and work that is governed by machine or conveyor belt in such a manner that the employees themselves are prevented from varying the speed of the work. Otherwise efforts shall be made to arrange the work so as to provide possibilities for variation and for contact with others, for connection between individual job assignments, and for employees to keep themselves informed about production requirements and results.
>
> Control and planning systems. The employees and their elected union representatives shall be kept informed about the systems employed for planning and effecting the work, and about planned changes in such systems. They shall be given the training necessary to enable them to learn these systems, and they shall take part in planning them.

The Norwegian and Swedish Work Environment Acts of 1977 and 1978, respectively, build upon demonstrable evidence that machine-paced, monotonous work, done in social isolation and involving shift work, leads to unhealthy outcomes in both emotional and physical terms.[5]

There is a clear relationship shown in research and revealed in some

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5. Bjorn Gustavsen and Gerry Hunnius, New Patterns of Work Reform: The Case of Norway (Oslo: Oslo University Press, 1981); Bertil Gardell and Bjorn Gustavsen, "Work Environment Research and Social Change: Current Developments in Scandinavia," Journal of Occupational Behavior, Vol. 1 (January, 1980).

national legislation which connects technological change, job stress, and efforts to improve the work environment.[6] For example, the head of the World Health Organization Stress Lab includes democratization at the workplace among his list of proposed measures to combat job stress.[7] A considerable body of research has suggested that electronic office work is stressful and that ergonomic and administrative or organizational factors are critical to accomplish stress reduction.[8] The German Humanization of Work Program, federally funded and implemented, is within the occupational safety and health ministry. In short, research revealed the benefits of employee involvement including reduced accidents and injuries, reduced stress and other ill effects from work, and thus the expansion of worker participation was encouraged and mandated by governmental job safety and health laws. Over the past decade, there has been some interest in this approach by other nations as well.

The 1970s saw a rash of industrial experiments to reform the workplace and involve workers. The Swedish Employers' Federation claimed that 500 such innovations had been evaluated during the 1970s and supported such industrial democracy efforts.[9] Similar arguments emerged throughout the 1970s in both

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6. This perspective is offered in Steven Deutsch, "Extending Workplace Democracy: Struggles to Come in Job Safety and Health", Labor Studies Journal Vol. 6 (Spring, 1981) pp. 124-132.

7. Lennart Levi, Preventing Work Stress (Reading, MA: Addition-Wesley, 1981).

8. U.S. Congress, Office of Technology Assessment, Automation of America's Offices (Washington, D.C.: U.S. Government Printing Office) OTA-CIT 287, December 1985), Chapter 5

9. Swedish Employers' Federation, Job Reform in Sweden: Conclusions from 500 Shop Floor Projects (Stockholm: SAF, 1975); see also Stefan Aguren and Jan Edgren, New Factories: Job Design Through Factory Planning in Sweden (Stockholm: Swedish Employers Federation, 1980).

the international management literature and union publications.[10] During the decade of the 1970s, a large number of international conferences were held, and by 1981, there were thousands of participants at the international quality of working life conference in Toronto, indicatin. the growth of this interest and the magnitude of application.

Although some European political traditions endorsed worker self-management as part of a larger program for the social transformation of society, the interest in industrial democracy came mostly as a nonideological, highly pragmatic development. The argument was that heightened employee interest and involvement in work increased efficiency and productivity, and hence, produced effective healthy work organizations. Furthermore, it was argued that such employee involvement would contribute to improved quality of production and decreased accidents and ill effects at work. Thus, worker participation was championed by both sides of the bargaining table and supported by government; it was seen as a forward-looking movement to create better work organizations, more competitive enterprises, and a more fulfilling work life and labor relations climate for all.

Needless to say, this perspective is the ideal and the position of committed advocates. But they were prominent in the management and labor community and influenced American managers working within Europe, traveling abroad and meeting their colleagues at conferences and reading the vastly expanding reports in the literature. The impact on the US was significant, particularly given the developments within this country at the same time. The dramatic application of microtechnology across economic sectors took place

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10. C. Asplund, Redesigning Jobs: Western European Experiences (Brussels: European Trade Union Institute, 1981).

in all industrial nations. Whether in North America, Australia, Japan, or Western Europe, factories and offices were being automated on a new scale and the late 1970s saw a major push to adopt the new technology. The worldwide economic crisis in the subsequent years ffected all industrial nations, and in many countries, commissions were appointed to explore the implications of microelectronics for labor relations, education, and the economy. Some, such as the Canadian Task Force on Microelectronics and Employment, recommended joint labor-management committees to address such issues as training, productivity improvements, and layoffs.

The patterns of labor relations vary considerably among the industrial nations of the West. In general, however, the interest in technological change at work has been greater in recent years in Europe than in the United States. Many European unions have been more aggressive than those in the U.S. over issues of advance notifications of technological change in the workplace, joint participation in workplace design and the introduction of new technology, protection of jobs and programs for relocation, retraining, and other means of cushioning the effects of job loss. This greater support for participative approaches has fostered more joint efforts to address technology questions. There is agreement in some quarters about the benefits of technology to remove monotonous jobs and nurture semi-autonomous work groups with greater worker influence.

For example: in 1982, "Agreement of Efficiency and Participation" was signed by the Swedish employers' federation (SAF) and the blue-collar (LO) and white-collar (PTK) union federations. It recognized the need for efficiency and productivity if Swedish enterprise was to be more competitive in the international markets; it also detailed some of the means of implementing technological change to achieve these goals. The paragraph dealing with technical development states:

> **Item 1. General direction.** The parties are agreed that day-to-day as well as more far-reaching technical modernization offers many opportunities that must be taken to enable the company to survive, achieve success and therefore also safeguard jobs and employment. Capital expenditure makes it possible to improve productivity as well as creating opportunities to introduce new production systems, utilize modern technology, develop the expertise and skills of employees, and thereby increase the competitiveness of the company.
>
> **Item 2. Stimulating work.** In the event of technical change, a sound job content shall be the goal, together with opportunities for the employees to increase their skills and accept responsibility for their work. The knowledge of the employees should be stimulated together with their ability to cooperate with and have contact with their colleagues.
>
> **Item 3. Major changes.** When technical change that involves major changes for the employees is being planned, the trade union organizations shall participate. Such participation shall take place in accordance with the provisions in (sections 7 and 8).
>
> The employer shall describe the considerations underlying the new technology, and the technical, financial/economic, work environmental, and employment consequences that can be foreseen and possibly make proposals for appointing project groups.
>
> **Item 4. Training information.** It is important that the employees are given opportunities for further development of their vocational expertise and skills. The company shall make available as early as possible training for the new jobs that technical change will involve. Such training shall be provided at the expense of the company and on unchanged pay and employment conditions.

The point is that all have a stake in the development and application of new technology and that labor supports such investment as long as human considerations are well considered and employees involved.[11]

This approach to applying technology at work is built into the broader Swedish moral/legal system. Just as Sweden has the highest per capita robots in production, that nation may lead the world in the number of computer data based personal registries. With a population of only 8.4 million, it is estimated that there are perhaps 70,000 registries and that each Swede is included in between 50 and 300 registers of personal computerized information. Within Sweden, there is an assumption of good intent and that the computerized data fields will not be abused or violate privacy. However, this belief has also been backed by law in the early 1970s' legislation which created a Data Inspection Board to control access and use of such files. Nevertheless, Swedish public opinion reveals that while the citizenry is better served as a result of these data registries, the Swedish people have some concern about protection of privacy.[12]

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[11] For an analysis of this issue see Steven Deutsch, "International Experiences With Technological Change," Monthly Labor Review, Vol. 109 (March 1986) 35-40.

The key finding here is that in some other industrial nations the issues of privacy of the citizenry and rights of employees at work are treated within the broad social-political framework of the country rather than in the labor-management sphere. In Sweden, there was a move to legislate control of data registries as the proliferation of computerized personnel data bases became apparent. It was typical within that social-political system to address the issue in terms of potential abuses and not wait for problem cases to accrue before acting. This anticipatory problem-solving (or pro-active vs. reactive stance) varies across national boundaries. The concerns over citizen privacy and the spectre of "big brotherism" is international and legislative protection has been sought in most countries. The concerns over workplace monitoring are also widespread and have been nurtured by international labor federations; and, laws and labor negotiations which have addressed remedies to the problem have been given considerable publicity and international dissemination.

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[12] Gert Persson, "Computerized Personal Registers and the Protection of Privacy," Human Environment in Sweden, No. 26, June 1986 (Swedish Information Service, NY). For a broader overview see Information Technology in Sweden (The Swedish Board for Technical Development, Stockholm 1985).

We might expect that just as there has been an extensive interchange of experiences and perspectives on labor-management relations and employee participation or industrial democrac programs across the Atlantic so, too, we might anticipate more sharing of viewpoints and practices on electronic monitoring of citizens and workers and workplaces in the immediate future.

RECENT DEVELOPMENTS IN THE UNITED STATES AND LESSONS FROM ABROAD

The upheavals and changes of the 1960s in the United States formed a broader societal context for the climate of labor-management relations. Evidence in the early 1970s demonstrated a high level of concern over worker dissatisfaction, absenteeism, low morale, or what journalists called "blue-collar blues." Wildcat strikes and other signs of work disputes were manifest and a rash of studies and media accounts attempted to understand the problems of worker discontent in this country. Finally, the then-secretary of Health and Human Services appointed a Work in America Commission to explore the problem and offer recommendations. The resulting publication was a major watershed in this country and helped to put work reform on the agenda in the labor and industrial relations community.[13] This study outlined many experiments in the U.S. and abroad in democratizing work organizations, increasing employee participation, and redesigning work.

Some of the movements for change in the 1960s, including civil rights and environmental organizations, had made coalitions with labor organizations. Legislation was passed as a result of the political climate -- the Civil Rights Act of 1964, the Occupational Safety and Health Act of 1970 as well as others. The mood of the country was sympathetic to government regulation to protect the environment, to protect people from discrimination, and to protect workers on the job. Still, the labor relations system remained a voluntary one based upon free collective bargaining. Thus, the impetus for work reform came primarily from the practitioners — managers and unions, not from government. A wide range of experiments and programs for reform were developed in the 1970s and it was clear that increased employee involvement on the job was a demand or expectation by more workers and a growing a component of good managerial philosophy.[14]

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[13] HEW, Work in America (Cambridge, MA: MIT Press, 1973).

The 1970s also witnessed a great many changes in the country and the development of microelectronics and the application of new technology at work was among the more dramatic. White males now comprise a minority of the American labor force and this trend will continue. A shrinking minority work in manufacturing jobs.[15] The world-wide economic upheavals, perhaps marked by the 1973 energy crisis, has had profound immediate and long-range consequences for the American economy. Technology has helped to shape some these shifts, and will continue to play a critical role in our changing economy.[16]

Just as the American labor-management community has been quite aware of

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14. This is reviewed in Steven Deutsch and Sandra Albrecht, "Worker Participation in the United States: Efforts to Democratize Industry and the Economy," Labour and Society, Vol. 8 (July-September 1983) pp. 243-269.

15. See U.S. Congress, Office of Technology Assessment, Technology and Structural Unemployment: Re-employing Displaced Adults, OTA-ITE 250 (Washington, D.C.: U.S. Government Printing Office, February 1986), Chapter 8; Ronald E. Kutscher and Valerie A. Personick, "Deindustrialization and the Shift to Services," Monthly Labor Review (June 1986) pp. 3-13.

16. See Business Week, "High Tech to the Rescue," (June 16, 1986).

work reform and experiments in employee involvement and job restructuring abroad, so, too has there been considerable awareness of foreign treatment of technology and its application to the workplace. Technology has been a factor in moving investments and closing production facilities. both here and abroad. In many countries, there are legislated mandates which restrict the unilateral rights of employers to close a plant, including requirements for job retraining, and advance notification to employees. The problem of plant closings has been a major issue in the U.S. for the past few years and the labor-management community has explored various remedies both within the collective bargaining framework and outside — including legislation at the national and state level.[17]

The U.S. government has a number of bilateral and multilateral agreements to share information on occupational health data and research, information pertaining to job health standards, and the like. There is a broader work environment framework in Europe which tends to include psycho-social factors, human factors and ergonomics, and other dimensions to a greater degree than is true in the United States. However, the occupational health and safety perspectives in Japan and much of Europe have become more and more common in this country. Many publications have launched the ergonomic achievements in England, Japan and Scandinavia; other articles and books have emphasized the Norwegian Work Environment Law and the use of data stewards to deal with new technology.[18] Many union and management delegations have visited other

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17. U.S. Congress, Office of Technology Assessment, Plant Closing: Advance Notice and Rapid Response - Special Report, OTA-ITE-321 (Washington, D.C.: U.S. Government Printing Office, September 1986).

18. Bjorn Gustavsen and Gerry Hunnius, New Patterns of Work Reform: The Case of Norway (Oslo: Oslo University Press, 1981).

industrial nations to study their approaches to work environment, their cooperative and joint approach to work environment and worker training.[19] The community of scientists and health professionals has tended to be transnational, but it is th case that U.S. management, labor, and allied parties have been much influenced by developments abroad.

The challenges posed for the American economy in recent years have not been unique. But as many analysts have observed, our international competitors have developed industrial policies which are genuinely tripartite and involve government, management, and labor in concerted action. Moves in this direction have been significant in the U.S., but representatives of labor and management, as well as public policy makers, have argued that we need to learn lessons from the more successful foreign competitors.[20] Countries which have fewer natural resources, such as Japan, or countries which have similar basic industries (steel, auto, wood products), such as Sweden, have exploited new technology in a major way and have articulated cooperative labor-management policies with major governmental coordination. This discussion will surely continue in the near future as the United States attempts to cope with its lost dominance in the world economy, loss of foreign markets, trade deficits and the like.

This report has demonstrated that electronic monitoring at the workplace must be seen in a broader context. It is one component of the total labor-management climate, as well as part of the culture with its values and ideologies. This is true in all nations. The massive amount of data kept on

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[19] This is reviewed in Steven Deutsch, Work Environment Reform and Industrial Democracy," Work and Occupations, Vol. 8 (May, 1981) 180-194.

[20] Business Week, "The Hollow Corporation," (March 3, 1986); Robert Lund and John Hansen, Keeping America At Work: Strategies for Employing the New Technologies (New York: John Wiley & Sons, 1986).

Swedish citizens has not become a major issue because the potential for abuse has not been realized. The adoption of laws restricting data registries and controlling citizen monitoring are reflective of the sentiments in each country. In similar fashion, where the quality of labor-management relations is positive, and where employees are consulted and actively involved in decision-making at work, there are likely to be few abuses of monitoring. In fact, the capability of electronic monitoring might be explored jointly by employees and managers and the results also used jointly to elicit problem-solving around concerns over productivity, quality of production, (workers' attitudes) or even matters of security. In short, the issue is most often perceived as a problem where the level of trust is low and the technology is used unilaterally by management without consultation and participation by the workforce. If there is a clear lesson for American managers here, it is that electronic monitoring should be perceived like any other form of supervisory function. International experiences indicate that participative styles of management are likely to build confidence and trust on the part of the workforce and that the technology can be used in such a way as to increase both worker involvement and quality of work life as well as productivity.

Sweden and Norway have a history of cooperative labor-management relations, and over the past two decades, have led in programs of employee involvement and active participation. This has included participation in shop floor decision-making, decisions about work environment, organizational structure, implementation of technology, and investments. Along with such democratic tendencies at work, these nations have shown high levels of economic growth, high standards of living, very low levels of unemployment, adoption of advanced micrcelectronic technology, and sensitivity to issues of privacy and protection of worker rights. While one cannot use any nation as a blueprint, there are some clear suggestions here which might be applicable for the United States. A labor force and union movement that is consulted over technology issues and sees the use of microelectronics, including workplace monitoring, as something which will benefit workers as well as managers, is likely to be engaged, productive, and committed to quality of production and economic success. Many practitioners in industry believe these are noticeable lessons from abroad and are worthy of application in this country.

The flavor of this approach is nicely captured in a description of the Swedish Work Environment Fund Development Programme:

> On of the programmes' objectives is to ensure that new technology is introduced in a manner which will improve the environment, develop and expand work content, and promote the creation of more stimulating occupations and rewarding work assignments, thereby enabling the technology to be used - in the widest sense - in the most positive manner possible. Only by adapting technical innovations designed to meet human requirements can the competitiveness of Swedish industry and the efficiency of public administrative bodies be given a real boost.[21]

Yet, as has already been noted, there are important differences between the United States and Sweden in terms of the strength of unions, the history of labor-management relations, the role of the labor party (Social Democratic Party) and the government, labor law and the like. The American legal system is rather unique, albeit the emphasis has shifted in recent years with the decline of unions, new programs of worker participation, a shifting role of government and philosophy in the courts and NLRB.[22] More important, there is a set of traditional attitudes which constitutes a barrier for the adoption of new approaches.

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[21] Swedish Work Environment Fund, The Development Programme: New Technology, Working Life, Management (Stockholm: ASF, n.d.) p. 4.

[22] See Benjamin Aaron, "Labor Law Research in North America," in Sten Edlund (ed.), Labor Law Research in Twelve Countries (Stockholm: Swedish Center for Working Life, 1986).

> Our legacy of adversarial union/manangement relationships, which is rooted in part in the failure of nineteenth and early twentieth century managers to be concerned about the nature of work being created through technological change, thus serves as a substantial barrier to the introduction of new technologies in the current era. This leaves the U.S. at a distinct competitive disadvantage with respect to other countries (notably Japan) whose labor/management relationships at this point are more cooperative than those in the U.S. One can only wonder how the implementation of computer-based technology will fare if we do no better in accounting for human factor in designing and implementing that technology than we have done in the past.[23]

It is abundantly clear that American multi-national firms function well in the different cultural and legal environments abroad. American managers have adapted and learned the correct approaches for working in Sweden, Japan and many other industrial nations who are our competitors. While no overnight changes should be expected in the way in which American managers operate at home, there are growing signs that the challenges in international trade and foreign competition are driving forces towards an altered posture of labor-management relations. The American management community has learned from its overseas experiences and has noted the successful approaches in other industrial societies. This suggests a continuing trend in many quarters towards lessened adversarial and more cooperative labor-management relations and some important innovations in employee involvement tied to introducing new technology at the workplace. The number of firms which have adopted such approaches is considerable; more importantly, they represent very large proportions of the workforce in their respective industries; e.g., auto, telecommunications, aerospace.

The federal government is acting in partnership in some of these endeavors, at least in so far as philosophical support and some catalytic activity is concerned. "The Department of Labor has taken a strong position in support of labor-management cooperation as an important prerequisite to America's return to preeminence in the world marketplace."[24] Futhermore, some of the participative management initiatives have been taken within governmental agencies at both the federal, state and local level. The lessons from abroad are only suggestive and do not constitute a blueprint, but they have already had some significant influence and are likely to be a continuing stimulus for government, management and labor initiatives and cooperative approaches to managing new technology in America's offices and factories.

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[23] Lund and Hansen, op.cit., pp. 145-146.

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24. Stephen Schlossberg and Steven Fetter, U.S. Labor and the Future of Labor-Management Cooperation, (Washington, D.C.: U.S. Department of Labor, Bureau of Labor-Management Relations and Cooperative Programs, 1986) p. 2.
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THE CONTEXT FOR EXPLORING WORKPLACE MONITORING

Steven Deutsch

Report prepared for the U.S. Congress Office of Technology Assessment
Communications and Information Technologies Program

This document was prepared by an outside contractor as an input to an ongoing OTA assessment. It does not necessarily reflect the analytical findings of OTA, the Advisory Panel, or the Technology Assessment Board.

Introduction and Findings

Later chapters in this report will detail the history of monitoring work and the legal framework which applies to employee privacy rights and associated issues of worker protection. This discussion does not duplicate these later reviews, but, rather, provides a distillate or capsule of the broad and significant changes which have occurred in the labor force, occupational structure, technology at the workplace, context of global economics, and labor-management relationships. This overview is not intended to provided an in-depth discussion, much of which is provided in other OTA reports cited below. However, it is argued that as a prelude to understanding the specifics of electronic workplace monitoring, these contextual features need to be outlined.

Electronic monitoring at the workplace is but one feature of the dramatic changes affected by microelectronics in the U.S. and the industrial world economy. The late 1980s can best be understood in the broader context of global economic developments, shifts in the U.S. labor force and occupational structure, and the emergence of microelectronic technology and its widespread application at work. This chapter develops the context into which to place an examination of electronic monitoring and the challenge for the congress and policymakers. Monitoring is an integral part of the larger system of management, labor relations, industrial competitiveness, and ethical and legal systems; and, therefore, must be understood within this framework. Much is undergoing rapid change in the U.S. and the situation today and for the near future is significantly altered from that of a few decades ago. Concretely, the issues of who works in the United states, where we work, what jobs we do are markedly different from even the immediate past. Technology is a significant factor which has accompanied these change. International developments, changing labor-management relationships, and cultural values have also undergone transition. What follows is an overview of these trends and the setting for the subsequent detailed analysis of electronic monitoring. Findings from this review are:

1) The American labor force has changed dramatically in recent decades, primarily due to the major influx of women who now constitute close to one-half of all working Americans. It is a labor force which is also more non-white, as well as better educated.

2) The shifts away from goods-producing to service-producing industries has accelerated in the past two decades. The U.S. is predominately a white-collar, service vs. goods producing society.

3) Early automation in the 1950s and 1960s was largely restricted to manufacturing, but there has been an enormous growth of office automation in the past decade and investment per employee by 1990 may be comparable in office and factory settings.

4) There has been a large growth of clerical employees: from 5 in 1940 to 20 million in 1980, from one out of ten to one out of five employees in the U.S. Only 6.3 percent of males are in clerical jobs while over one-third of all women workers in this country are clericals. Women are disproportionately affected by the microelectronic technology in the office environment.

5) The growth of office employment and the rise in office in office automation makes for a greater proportion of the American workforce in settings where computerized work monitoring is possible.

6) Most office workers in the private sector are unorganized. A high proportion of federal, state and local government employees are unionized. For union workers, there has been growing concern and efforts to address the new technology including workplace monitoring in collective bargaining agreements and through quality of worklife committees. A parallel activity has been efforts to pass state legislation protecting workers on VDTs and addressing the worker privacy issues. Such reforms at the state and local level may well accelerate in the near future.

7) The challenge for meeting international competition has pushed many in government, management and unions to adopt a cooperative labor-management stance and to work towards cooperative approaches for best maximizing new technology to improve productivity, quality of production, and quality of working life.

Growth of the Service Sector[1]

Although the American Industrial Revolution, beginning about 1850, started about a century later than England, the pace of manufacturing development was rapid. by 1890, the Western Frontier was largely closed and land secured. The massive wave of immigration from that time until World War One remained on the Eastern Seaboard or Industrial Heartland, working the basic manufacturing industries of the country. By the 1920s, the majority of the population lived in urban places and worked in the expanding manufaturing sector.

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[1] A recent OTA report reviews these trends as well. U.S. Congress, Office of technology assessment, Technology and Structural Unemployment: Reemploying Displaced Adults, OTA-Ite-250 (Washington, D.C.: U.S. Government Printing Office, February, 19860. Chapters 4 and 8.

The United States emerged as the supreme industrial power in the world and remained so through World War Two and into the 1970s. The U.S. produced and marketed commodities all over the world, established the highest standard of living, and this country was the key for rebuilding the defeated and devastated economies of Europe and Japan.

One of the major areas of labor force expansion was in the public sector. The Depression saw the creation of public works, and the World war Two period was one of almost total mobilization of the work force (a record 1.2 percent unemployment by 1944). However, it was in the post-war eara that this country saw the substantial growth of employment in federal, and especially state and local employment. The total public sector employment went from about 5 million to over 17 million, never more than one-sixth of the labor force (16%). While that is still a small proportion of the total labor force contrasted with some other nations (e.g., Sweden with about 38% of the labor force in public employment), and it has recently been declining, it represented a major growth from the 1950s through the 1970s and served a crucial role in meeting the demands for new jobs with a growing labor force.

Office and service employment grew slowly during this period, but escalated rapidly beginning in the 1970s. There has been an explosion of jobs in this sector of the economy, paced by retail/clerical work, services in fast food and other conveniences, communications/information and media, and areas such as health care, insurance, and the servicing of the electronics industry and microelectronic applications. Projections for job growth in the decade ahead indicate that the service sector will account for the overwhelming proportion of new jobs. Meanwhile, manufacturing will continue to decline in both absolute numbers and as a percentage of the American labor forces.[2] By 1980, 20% were in manufaturing, while 70% worked in the services.[3] Over the past couple of decades, both the nature of jobs and where in the economy Americans work has been markedly altered and the trend in recent years has accelerated and will likely continue to do so in the foreseeable future.[4]

Women and the Labor Force

Few shifts in the American economy are as dramatic as the sex composition of the labor force. In 1950, just prior to the early stages of automation, women were 24 percent of the labor force. By 1970, before the massive application of microelectronics in office settings and the huge expansion of the service sector women were 38 percent of the labor force. The most recent figure for 1986 suggests that almost one-half of all American workers were female — presently 45% and still increasing.[5]

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[2] See U.S. congress, Office of Technology assessment, Technology and Structural Unemployment: Reemploying Displace Adults, (Washington, D.C.: U.S. Government Printing Office, OTA ITE-250, February 1986)

[3] Ronald E. Kutscher and Valerie A. Personick, "Deindustrialization and the Shift to Services," Monthly Labor Review, June 1986, pp. 3-13

[4] See Janet L. Norwood, "Jobs in the 1980s and Beyond," and Pat Choate, "Looking Forward: Jobs and Workers," both in Daniel Burton, J., et al (eds.) The Jobs Challenge: Pressures and Possibilities (Cambridge, MA: Ballinger Publishing Company, 1986).

[5] U.S. department of Labor, The United Nations Decade for Women, 1976-1985: Employment in the United States (Washington: U.S. Government Printing Office, 1985).

While women have continued to enter almost all occupational categories, they remain highly concentrated in a few occupations, and the overall pay gap between men's and women's jobs remains with women earning on the average only 60 percent of what men earn. The percentage of women in the following occupations are: private household workers, 96%; registered nurses, 96%; apparel sales workers, 83%; financial records processing, 90%; elementary teachers, 83.6%; secretaries, 99.1%; childcare workers, 97.6%; kindergarten and preschool teachers, 98.4%.[6]

Women continue to be highly segregated in the U.S. labor force. Over 36 percent of all employed women work in just 10 occupations and 9 of them are female dominated as suggested above. The evidence is that clerical occupations, those most likely to be automated and electronically monitored, have become more female-dominated in recent years.[7] This is reflected in industrial sectors such as insurance, banking, telecommunications, and in the job categories such as office clerks, cashiers, secretaries, bookkeepers.[8] Thus, we have experienced a substantial increase in the numbers of clerical workers, a doubling of the proportion of the workforce which is female, and a high degree of sex segregation among clericals. This is in large part why women are currently experiencing technological change at the workplace in a major way and perhaps differently than the male workforce in manufacturing and in mixed gender occupational categories.

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[6] Ibid., pp. 135-137; U.S. Department of Labor, Women's Bureau, Time of Change: 1983 Handbook on Women Workers (Washington, D.C.: D.O.L., 1983).

[7] Barbara Reskin and Heidi Hartmann (eds.), Women's Work, Men's Work: Sex Segregation on the Job (Washington, D.C.: National Academy Press, 1986).

[8] Heidi Hartmann, Robert Kraut, and Louise Tilly (eds.), Computer Chips and Paper Clips: Technology and Women's Employment (Washington, D.C.: National Academy Press, 1986).

> As recently as 1980, business spent only one-third as much on technology per office work as was spent per production worker. By 1990, investments per employee are expected to be roughly equal in the office and factory. Expanding use of technology is improving productivity in the office, just as it has in the factory.[9]

The rapid rise of office automation has a special impact on women since the overwhelming majority of secretarial and clerical positions are female. The impact in the years to come, something already begun, will range from job dislocation, major changes in job skill requirements and tasks, to work environment concerns.[10] Among the issues in the automated office are those that touch on productivity, access to personal data, and privacy rights which involve electronic monitoring.

The Changing Pattern of Labor-Management-Government Relationships

Technological change does not occur in a vacuum and is typically accompanied by a myriad of related changes. Technological change rarely occurs in an otherwise unchanging environment. Other factors, such as labor-management relations, may change as well.[11] This observation is most fitting for the context of the U.S. in there latter part of the 1980s. The microchip has produced dramatic changes in automating offices as well as factories. In the early stages of automation, the changes were largely in the factories of

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[9] "New Tech in the Office," United Technologies ad in New York Times, September 2, 1986.

[10] U.S. Department of Labor, Women and Office Automation: Issues for the Decade Ahead (Washington, D.C.: U.S. Government Printing Office, 1985); U.S. Congress, Office of Technology Assessment, Automation of America's Offices (Washington, D.C. Government Printing Office, OTA-CIT-287, December 1985).

[11] U.S. Congress, Office of Technology Assessment, Technology and Structural Unemployment: Reemploying Displaced Adults, OTA-ITE 250 (Washington, D.C.: U.S. Government Printing Office, February 1986), p. 324.

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the nation; in recent years, the acceleration of application of microelectronic has been in the services and goods-producing sectors other than manufacturing. With the changes in technology, we are noting significant challenges for labor-management relations. As a recent OTA report summarized:

> Business may find that different organizational approaches are more suited to modern technology and that managerial strategies of the past are less appropriate. Automated systems cannot be idiot-proofed; indeed, they tend to be more sensitive, less robust that labor-intensive systems. Thus, although automated systems may need fewer employees, those employees (including production and non-supervisory workers) carry heavier responsibilities and need different skills than workers in older style factories and offices.. This implies that new methods of work organization that encourage workers to participate in solving problems, work with others, and make decisions as members of a team may prove more productive and efficient. Organizational changes of this kind could make the jobs of some U.S. production workers less vulnerable to competition from low-wage nations."[12]

From a strongly laissez-faire philosophy in the early stages of the American Industrial Revolution, the position of government has become more active in relationship to the private economy. Managerial philosophy, the pattern of labor-management relations, and the system of collective bargaining have all undergone transition. The concerns of this larger report, electronic workplace monitoring, have emerged in this broader context and can best be understood within it. An historical review of workplace monitoring is presented later in Chapter 3 and what follows is a cursory overview to outline recent development in the pluralistic American labor relations system.

There has been a long history of efforts to organize workers to best represent their interests associated with their jobs, but the watershed came with the passage of the National Labor Relations Act in 1935. Now more than 50 years old, the NLRA established the right of workers to organize and the obligation of employers to bargain with workers' representatives over hours, wages, and working conditions. In 1935, the bulk of union members were craft workers in skilled trades; but the major organizing in the late 1930s and 1940s effectively unionized the large manufacturing industries with semi-skilled and unskilled production workers in auto, steel, rubber, and associated areas. By 1953, over one-third of the U.S. labor force held membership in trade unions. The growth of public sector employment saw state legislation affecting collective bargaining for such workers, and as a result, there exists a unionization rate of twice that in the private sector. Chapter Six of this report amplifies the legal status of workers in private and public employment.

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[12] Ibid, p. 321, also see section "Technology and the Organization of Work," p. 355ff.

As union membership grew in numbers and collectively negotiated labor-management agreements became more common in American industry, the role of government also continued to shift. A social compact was developed during the late 1930s and during World War Two in which there was widespread acceptance of the right of workers to organize, collective bargaining was institutionalized, and government actively engaged in efforts to maintain industrial harmony and productivity. After World War Two, this accord was shattered somewhat and the first of several key amendments to the NRLA was passed. Nevertheless, the pattern of collective bargaining in which there is an accepted but adversarial labor-management relationship was characteristic.

U.S. economic world dominance faced major challenges in the 1970s, sparking new considerations in the labor-management field. Over the past decade there has been increasing concern over productivity, efficiency, cost control, and international competition. Two divergent trends have emerged in response to these over-riding issues. One has been to accelerate U.S. firms moving production off-shore. A related trend has been the push towards "concessionary bargaining' whereby employers have sought to reduce costs in U.S. production facilities, often exchanging job security and related guarantees for wage reductions, job rules reform and the like. This pattern has not been limited to the manufacturing sector albeit that is where the dominant pattern has merged. The pressure to reduce costs in non-maufacturing employment within the country is also apparent. Some service operations have also been moved off-shore, such as the American Airlines computer reservation system in Barbados which is facilitated by electronic satellite transmission.

There is a significant alternative response to the global economic challenge of recent years; namely the move towards what has been characterized as "the new industrial relations."[13] This is a generic reference to managerial initiatives to increase labor-management cooperation, creating a better mesh between corporate and employee needs. A major objective of these new industrial relations is increased competitiveness through employee involvement in productivity, quality of production, and the overall quality of working life. This pattern of labor relations does not reject the heritage of collective bargaining, but it stresses the need to go beyond contractual relationships and nurture on-going problem-solving processes. The motivation is pragmatic since the evidence suggests that employee involvement can profoundly affect job satisfaction, morale, productivity and efficiency, performance, and product quality. It is argued that employees, and their representatives if they are organized, have a stake in such an approach because both an improved quality of working life and the success of the firm

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13. See special issue of Business Week (May 11, 1981) on "The New Industrial Relations."

are beneficial to the workers. A wide range of experiments in these modes of cooperative labor-management relationships have been developed since the early 1970s, covering manufacturing and service sectors, public as well as private employers, and in a range fo fields, size of work units, and localities.[14] The approach has been endorsed by some of the largest industries in the country, including those most challenged by international competition and who believe that altered labor relations were fundamental to their viability. Government agencies at the federal, state and local level have also experimented with quality of work life (QWL) programs. The U.S. department of Labor established a Bureau of Labor-Management Relations and Cooperative Programs which actively promotes conferences, disseminates reports, and provides consultation.[15] In an era with considerable philosophical support for deregulation and private sector initiatives, the federal government still plays a role as a catalyst for improved labor-management relations and efforts to increase productivity and American's competitive edge.[16]

The past two decades have witnessed extraordinary changes in the U.S. economy. The internationalization of the economy has grown with foreign investment in the U.S. and major penetration of domestic markets, causing a substantial imbalance of payment problems. Meanwhile, U.S. firms have moved a substantial amount of production off-shore, largely as a move to cut costs and meet international competition. The application of new technology has accompanied the global economic trends and some analysts argue that advanced technology is critical to assist this country in reversing the loss of its competitive edge in the world marketplace.[17] Along with calls for relying upon technology to increase productivity and quality have come increasing arguments for a more participative style of management and greater employee involvement in the technologically advanced workplace.

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[14] An overview of the issue is given in Steven Deutsch and Sandra Albrecht, "Worker Participation in the United States: Efforts to Democratize Industry and the Economy," Labour and Society, 8 (July-September 1983), 243-269.

[15] U.S. Department of Labor, A Conference on Quality of Working Life: Issues Affecting the State-of-the-Art (Washington, D.C.: DOL Bureau of Labor-Management Relations and Cooperative Progra , May 1984).

[16] President's Commission on Industrial Competitiveness, Global Competition: The New Reality (Washington, DC: U.S. Government Printing Office, 2 Vols. January 1985).

To maximize flexibility in production, firms need to have workforces which are capable of learning, working with new technology, and actively engaging in processes to improve quality and productivity. This is equally true in services as well as manufacturing, in offices along with factories and where they are linked in integrated facilities. The technology has the capacity to mirror traditional managerial values about the workforce and their motivation. This has been a factor which has led to electronic monitoring and which has the potential for countering creativity and employee flexibility.

> "Another reason for decreased employee initiative is that the more an information system can control the details of the job, the less even relatively trivial risk-taking opportunities are available. The monitoring capabilities increase the likelihood that a supervisor will notice a deviation from standard practice."[18]

New Developments in Legislative Reform and Action at the State Level

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17. Ralph Landau and Nathan Rosenberg (eds.) *The Positive Sum Strategy: Harnessing Technology for Economic Growth* (Washington, D.C.: National Academy Press, 1986); *Business Week*, "The Hollow Corporation" (March 3, 1986); *Business Week*, "High Tech to the Rescue," (June 16, 1986); Robert Lund and John Hansen, *Keeping America at Work: Strategies for Employing the New Technologies* (New York: John Wiley & Sons, 1986).

18. Shoshanna Zuboff, "New Worlds of Computer-Mediated Work, *Harvard Business Review*, (Sept.-Oct. 1982) p. 147.
(continued)

One last feature of the changing labor relations milieu is the broadening of the playing field and the players. Up until quite recently, the situation at work typically depended upon the relationship between employers and employees; where there exists a union it has been formally negotiated in a contractual arrangement which must conform to guidelines in federal and state law as well as court directive. Some laws cover all workers and workplaces regardless of the existence of a union or collective bargaining. These include laws on child labor, minimum wage, nondiscrimination on the basis of race, religion, sex, and age, and finally protection of health and safety on the job.

Such laws were neacted because of heavy lobbying by a range of groups including unions, civil rights advocates, women, environmentalists, community-citizen alliances, health professionals, and others. This move to the legislative area to deal with workplace issues has accelerated in recent years, particularly at the state and local level. For example, the coalition among labor, women, and environmental organizations has strengthened around the introductory VDT's into the workplace.

The rapid growth of use of VDT's has been a significant feature of the office landscape; it is estimated that perhaps 15 million workers use VDT's on the job and the number is continuing to increase in a wide range of settings, including both public and private sector employment. Beginning in the 1970s, new concerns were raised about health effects of working on VDTs, and research studies from around the world demonstrated vision, muscular-skeletal (ergonomic), psycho-social, dermatological, and possible reproductive health problems.[19] In this country, a series of studies by the National Institute

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19. For a summary see Jeanne Stellman and Mary Sue Henifin, Office Work Can Be Dangerous to Your Health (NY: Pantheon, 1983); Bob DeMatteo, Terminal (continued)

for Occupational Safety and Health offered recommendations particularly aimed at reducing vision, ergonomic, and stress problems for VDT workers. In other industrial nations, protective standards were adopted. Because a high proportion of office workers are women who are not in unionized workplaces and therefore are not protected under collective bargaining agreements, coalition building around the issue of VDT's encompassed unions, women's organizations, environmentalists, health professionals and community activists. Working together, these groups are largely responsible for the generation of legislative efforts in at least 22 states to explore VDT workers standards.[20] Some early outcomes have been state advisory guidelines, an executive order by the Governor of New Mexico, and the passage of a bill by the Oregon Legislature although subsequently vetoed by the governor. These efforts continue and there are many reasons to anticipate that such coalitions will grow and work for reforms in automated offices focusing in large part on state legislation. In a few states, these same coalitions have organized to push for laws concerning electronic monitoring at the workplace and there is every reason to anticipate continued efforts in this direction.

A parallel activity emerged a few years ago with states and municipalities passing laws requiring employers to provide information to

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20. For one state perspective see Marianne Parker Brown, Linda Help, and Janet Schneider, "Strategies in Hazard Protection: California Experiences," Labor Studies Journal, 10 (Winter 1986, pp. 290-299).

(continued)

workers about risks of toxics that they were exposed to the job. Such "right to know" laws were passed in many places and then a federal OSHA standard on hazard communication to workers was promulgated. It is clear from this experience that state and local concern and action was catalytic for federal action. State initiatives may trigger nationally standardized approaches at the federal level in the area of workplace monitoring as well.

The key point is that the conditions at the workplace, whether it is exposure to toxic substances, worker protection related to VDTs, or electronic monitoring, are all being addressed outside of the traditional labor-management arena. While these matters are approached within collective bargaining frameworks by managers and affected employees and their representatives, a parallel move has emerged involving a much larger segment of the citizenry. Some of the concerns appear to be gaining supporters across ideological lines, and as the issues become more publizied, the legislative efforts may gain momentum such as in the case of the use of lie detectors at the workplace.[21]

The declining proportion of the labor force represented by unions is one of the factors influencing the move towards legislative solutions to worker and workplace protection. There are federal and parallel state laws covering workplace safety and health, protection against discrimination in hiring, promotion, discharge, and pay, and a range of laws concerning worker right to know and privacy matters covering what data about individuals government can disclose to employers. There is some ersuasive evidence that these trends of expanding employee rights through sta and local legislation will continue. Closer to the focus of this larger re rt on electronic workplace monitoring, there is growing sensitivity on the p t of unions, civil rights and citizens groups and thus a similar buildup of ncern leading to state legislative remedies.

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[21] See Linda Greenhouse, "A Privacy Issue Cuts Across Ideological Lines" New York Times, June 20, 1986; U.S. Congress, Office of Technology Assessment, Federal Government Information Technology: Electronic Record Systems and Individual Privacy, OTA-CIT 293 (Washington, D.C.: U.S. Government Printing Office, June 1986); U.S. Congress, Office of Technology Assessment, Scientific Validity of Polygraph Testing: A Research Review and Evaluation - A Technical Memorandum, OTA-TM-H-15 (Washington, D.C.: OTA, Nov. 1983).

> Labor groups have gone on the of nsive against monitoring. More than 20 unions, including autoworkers an communications employees, have negotiated provisions in their c tracts to limit the practice. The legislatures of several states, cluding Wisconsin and Rhode Island, have reportedly discussed laws t regulate monitoring.[22]

As the American labor relations del continues to evolve and greater efforts to establish protection of em oyees at the workplace are registered in the state legislative arenas, we m ght well expect that the issues surrounding electronic monitoring, a hey touch on workers' health, privacy rights and other concerns, will be e ored within the legislative context.

Technological Change at the Workplac

One of the major features of th industrial Revolution was, the application of new technologies in p duction, and such changes have continued ever since. However, the so-called cond Industrial Revolution which emerged in the 1950s saw a major new develop nt. In addition to harnessing energy in more sophisticated ways, early facto automation introduced technology which displaced human labor. The cybernet s model, linking production automation with computers allowed for feedback stems and accelerated the transition of some production worker jobs into con le monitoring and machine tending and repair. In 1950s and 1960s, this "D roit automation" was largely confined to

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[22] Stephen Koepp, "The Boss That N er Blinks," *Time* (July 28, 1986) p. 47.

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mass produced manufacturing industries and limited production units. Nevertheless, the concern over the larger ramifications, potential job loss and the implications for the American economy, the unemployment picture, education, and training led to the appointment of a U.S. Automation Commission in 1965. Its report stressed that dislocation was not the issue but that the challenge was insufficient growth to meet the necessary job creation for 25,000 new jobs per week.[23] Some practitioners and analysts were more pessimistic and warned of the consequences of inadequately planned technological change. The problems cited were partially averted by the changes in the economy and the subsequent developments. The service sector and public sectors grew substantially and absorbed much of the growing labor force. Application of automated technology was limited, and even in the 1980s, it is estimated that perhaps only 5 percent of potential manufacturing automation has been achieved. We are told that the substantial growth of robotics and other technologies is yet to come.[24]

The differences between the early stages of automation in the 1950s and 1960s and the present era became clear with the emergence of the new microelectronic technology. The introduction of this technology was achieved through the very dramatic reduction of cost and much accelerated capacity in the micros as a result of the advances in silicon chip design and technology. Consequently, by the late 1970s and early 1980s, microelectronics was in application across industrial sectors, in factory and office alike, manufacturing and services, large and small scale enterprises, and in all levels of the public sector. It is estimated that one-half of American jobs are directly affected by microtechnology; for example, up to 15 million workers use VDTs. Because of the high capability and low cost, practically every company and office, production facility or governmental agency, can be automated at some level today. Thus, we need to recognize that the new technology is not selectively applied and limited in its relevance; in fact, most American workers will be directly affected by microtechnology at the job in the next few years.

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[23] See National Commission on Technology, Automation, and Economic Progress 6 volume report or the summary: Howard Bowen and Garth Mangum (eds.) Automation and Economic Progress (Englewood Cliffs, NJ: Prentice-Hall, 1966).

[24] The full range of factory automation issues are reviewed in U.S. Congress Office of Technology Assessment, Computerized Manufacturing Automation: Employment, Education and the Workplace (Washington, DC: U.S. Government Printing Office, OTA-CIT 235, April 1984).

The use of advanced microtechnology is important in helping to increase productivity and efficiency and in controlling costs.[25] There are also a number of beneficial applications which will reduce health exposures for workers. These factors are the up side. But there is another side as well, and that is the great increase in real perceived treats to job security, altered job tasks, and skill requirements. While technology is but one factor, linked to structural market changes, corporate reorganization, and global competition, it has contributed to the substantial dislocation of workers in the United States since the late 1970s.[26] The fact that over one-fifth of the American labor force experienced some involuntary unemployment during the course of the last year is cause for considerable levels of anxiety.[27] Research makes it clear that fear of job loss is stress producing, and increasingly, this new technology is seen as a source of stress for some

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25. See Business Week, "High Tech to the Rescue" (June 16, 1986).

26. OTA, Technology and Structural Unemployment, op. cit.

27. Markley Roberts, "Workers Without Jobs," American Federationist (March 25, 1985)

employees.[28] As later chapters of this report outline, uncertainty and implications of job monitoring are reported sources of stress for workers in the electronic office.

At the same time, technological change is approached cooperatively in some employment situations. Again, as indicated earlier, some employers have emphasized the role of employee involvement in designing and implementing technology.[29] The planned Saturn General Motors car is an illustration. Other major employers have used QWL and employee participation programs to plan for technological change and job restructuring as well as joint labor-management worker retraining efforts. Ford and the UAW, AT&T and the CWA, are illustrations of this approach to managing technological change. A substantial number of collective bargaining agreements address the matter of technology, including provisions for advance notice of technological change to employees, job protection, health and safety effects, and retraining. In the past few years some greater attention has been given issues such as the lie detectors, electronic monitoring, and chemical and electronic testing for drug use. These and similar issues touch upon privacy, worker rights, and ultimately concerns over dignity and quality of work life.

Technology at the workplace is a complex issue. It is clearly introduced to improve quality, productivity, and to reduce costs. The technology itself is not a problem; but how it is applied does pose a number of questions. These include the relative trade-offs between, on the one hand, civil liberties and individual rights, and on the other, efforts to deal with security. They include the juxtaposition of economic gains in productivity and the risks in term of worker health, stress and potential abuses of the technology.

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[28] Markley Roberts, "Unemployment-Still a Key Issue," American Federationist (April 21, 1984).

[29] Robert Lund and John Hansen, Keeping American at Work: Strategies for Employment the New Technologies (N.Y.: John Wiley and Sons, 1986).

In a society which is open and democratic and where assumptions of citizen rights are basic, it is hardly surprising that concerns over privacy rights and the full range of consequences of electronic monitoring have been raised in the Congress, in the media, and among employees and their representatives. This report explores these issues. But, throughout, it is critical to keep in mind that electronic monitoring at the workplace must be examined within the broader context of the economy, the labor force, the labor-management climate, and the full range of new technology applications at the workplace.